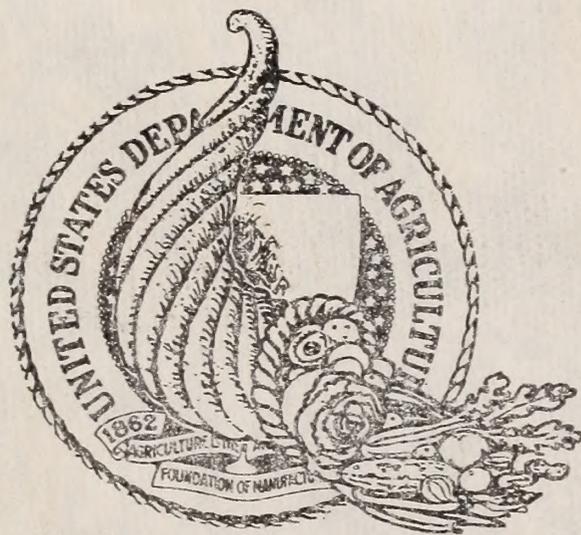


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The OFFICE OF
HORTICULTURAL CROPS AND DISEASES
SEMI-MONTHLY

NEWS-LETTER



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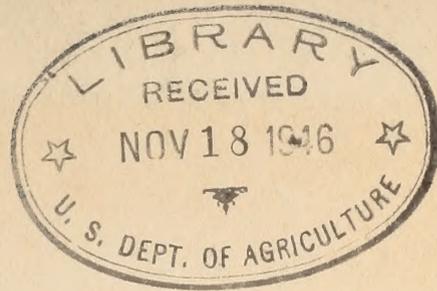
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"We are especially concerned over the thought sometimes voiced that as long as a man does not personally benefit, misrepresentation in fiscal records is not particularly serious, and over the possibility that the making of improper records may be disregarded or condoned by employees supervising the work of others. It should be kept clearly in mind that, in undertaking work for the Federal Government, a contract is entered into by the individual not only to carry out certain specific tasks but to accomplish these tasks under the laws and regulations provided by Congress and the executive officers of the Government.

"It is recognized that in some respects the fiscal regulations are not entirely adapted to the carrying on of some activities of the Department. Certain requirements at times appear unreasonable and difficult to operate under. Effort has been made to have undesirable restrictions corrected and such effort will be continued. But however difficult the fiscal regulations may seem, they must be strictly respected. No one can agree that a regulation which appears unjust or unreasonable to some persons affected by it is not to be complied with. That idea once started is fatal to the morale of any organization. It should be the universal rule that whenever Bureau Officers are in doubt as to what may properly be done in any fiscal matter, they will give the supervising or auditing officers all the facts and be guided by their determination.

"Many changes in our business practices have become necessary during recent years due to changes in methods of handling Government finances by Congress, the Bureau of the Budget, and the Comptroller General. More and more it is important that individuals responsible for Government expenditures be fully informed of Government requirements and changes in laws or procedure as made, and that the rules and regulations resulting be carefully and completely adhered to. It is appreciated that men in the field frequently do not recognize the significance of instructions as given in the form of memoranda or correspondence, and incident to the pressure of their work overlook new laws or practices which may be established. This is not accepted by any of the agencies concerned as an adequate explanation for deviation from the regulations. Too often ignorance of the fiscal regulations is pleaded as an excuse for their violation. A definite responsibility rests upon the supervisory officers for instructing their subordinates in the Fiscal and Administrative Regulations, and in making clear to them the responsibility for knowing the regulations. All employees in administrative positions are necessarily responsible for making clear to their subordinates that they must know and respect the regulations governing their work.

"With a view to rendering to our field service every practicable assistance in this direction, the Bureau has requested the Office of the Secretary to have its investigators stop at any point at which we are conducting field work whenever an investigator happens to be in the vicinity and to check up carefully on all business practices. Our field men should be instructed to extend to these investigators, whenever they may call, full cooperation and assistance in order that a careful study may be made. The individuals concerned should take advantage of this opportunity to secure first-hand information and assistance. The investigator, on his return to Washington, will send a report to the Bureau concerning his studies, and we in turn will be glad to cooperate with the office and the individual to insure a complete understanding and observance of Fiscal and Administrative Regulations and of thoroughly sound business practices.

"The Office of the Comptroller General also maintains a field corps of investigators that move from place to place in the field and investigate any branches of the service that may be conducting work in that region. Should these representatives of the Comptroller General's Office call on any of your field men, they should be given every cooperation toward a full and complete study of our business practices and the field men should take advantage of the opportunity to secure advice and assistance with a view to improving their methods.

"The Chief of Bureau must necessarily hold Heads of Offices responsible for the legal and effective expenditure of funds allotted to them for work under their supervision. To insure efficient administration it is necessary that they so delegate responsibility that approvals of expenditures be made only by those in a position to know that the expenditure is in fact made as represented and necessary and desirable in the successful accomplishment of the work as well as in conformity with law.

"Above all, it should be emphasized that the utmost frankness be maintained regarding any special difficulties or weaknesses in the work, and that all such matters be promptly and completely reported so that proper methods may be adopted and any misunderstandings and mistakes corrected at the earliest possible moment.

"Copies of this memorandum should be placed in the hands of all employees likely to be concerned in these questions."

Color has been found to be the most important quality factor in the sale of fruit, says the Bureau of Agricultural Economics, after 12 years of farm-products inspection service. Other quality factors include size, maturity, and defects due to insect injury, disease, improper packing and rough handling.

HOLLY "Tonight when you decorate your Christmas tree and
WREATHS. hang up a few holly wreaths," said W. R. Beattie of the
 office of Horticultural Crops and Diseases, speaking over
the radio on Christmas Eve, "it may be of interest to you to know
where these Christmas greens come from, and how they reach you.

"When I was boy living in eastern Ohio, we did not have the
annual Christmas tree, but instead we hung up our stockings around
the fireplace. There were no evergreens in that part of the country
which could be used for Christmas trees, and the shipment of Christmas
trees had not yet been commercialized. Now, hundreds and hundreds of
carloads of Christmas trees are shipped to the big cities and to
sections of the country where evergreens do not grow naturally.

"Christmas wreaths, especially those made of Holly, are becoming
more and more popular. These wreaths are made mostly by women who
live on farms and in the small towns of Delaware, Maryland, Virginia,
and North Carolina. Recently, the manufacture and shipment of holly
wreaths has attained great proportions in parts of Delaware where
there is a large supply of wild holly.

"In gathering the holly from which to make the wreaths, only
the short tips of the branches are removed from the trees. The follow-
ing year the trees make a new growth and the short branches can be
removed from the same trees year after year without any great injury
to the trees themselves.

"The men go into the woods, gather the holly and bring it home
where the women do the work of wiring the holly tips on wooden
hoops in the form of beautiful wreaths. An industrious worker can
make from seventy-five to one hundred of these wreaths in a day
and they are paid from seven to ten cents each for them, depending
upon the size and quality of the wreath.

"These wreaths are gathered every day by dealers and are packed
fourteen to seventeen dozen to a case, loaded into cars and shipped
not only to the large cities, but all over the Middle West where no
holly is found growing. The boxes of wreaths are consigned to
dealers who sell them to you for use in decorating your home tonight
for tomorrow's Christmas festivities.

"Thus you will see the back of the wreath that you hang upon
your front door or in your window there is a long, long story, but
that some person or persons who gathered the holly and after many
finger pricks from the sharp stickers on the holly leaves, made a
wreath for which they received a few cents for their Christmas
money and incidentally gave you a beautiful wreath with which to
adorn your home."

**BIDS NECESSARY
IN RENTING QUARTERS
AT OVER \$50 YEAR!**

November 9, 1929. This reads:

A very important decision by the Comptroller General in the matter of renting quarters, has been made in a letter to the Secretary of Agriculture under date of

"There is before this office for consideration, Contract Aae-4206, dated July 1, 1929, with the United States Fruit Auction Company, covering rental of garage space at Cincinnati, Ohio, for use of the Bureau of Agricultural Economics, at the rate of \$5.00 per month from July 1, 1929, which was entered into without advertising as required by section 3709, Revised Statutes. On October 1, 1929, the officer in charge, Section of Accounts, Bureau of Agricultural Economics, reported in this connection as follows:

'Form 1036 herewith. Competition was not obtained because the agreement covers the rental of real estate and therefore competition was impracticable.

'There are many factors entering into the selection of offices and garages. If the interests of the United States are to be conserved, location and availability must be considered. It is common knowledge that real estate is and has always been rented without competition and in so far as this office has knowledge there is no decision of the Comptroller General which would require competition for rental of real estate.'

"In connection with a similar question considered by this office it was held in decision of February 4, 1929, A-25522, as follows: There is noted your statement to the effect that competition, in the strict sense of the word, was not possible because of the numerous factors which entered into the case, such as suitable location to meet the needs of the various activities to be housed, the available space in a single building, and the necessary facilities, such as fire protection, arrangement of rooms for light and air, and control of building which appears desirable in a building required for court uses - all these factors are present in the building you propose to accept, while one or the other is lacking in the other buildings submitted. There appears no reason why such factors should not be included in the advertisement for bids so that all bidders may be advised and put on equal footing as to what would be considered in awarding the contract.*****

"In view of the explanations and representations made in the instant case, the lease will not be further questioned because of lack of advertising, but it would seem that advertising for garage space is, ordinarily, not only possible but practicable and the practice in your Department of acquiring such space without advertising should be discontinued."

**THIS MEANS THAT WE ARE OBLIGED IN FUTURE TO SECURE COMPETITION
IN RENTING QUARTERS WHERE THE RENTAL AMOUNTS TO MORE THAN \$50.00 A YEAR.**

PROOF MUST
BE RETURNED
PROMPTLY!

"We have been notified by the Office of Information," says the Chief of the Bureau of Plant Industry in Memorandum No. 467, dated December 10, 1929, "that from now on the printing requisitions on which proof is held in the Bureau longer than thirty days will be cancelled by the Government Printing Office. Because of the great volume of work it now handles, the Government Printing Office has found it necessary to make this ruling so that its material will not be tied up too long a time on any one job.

"All authors should be notified of this action, especially those in the field, so that proof which has to be submitted to them for reading will be immediately handled and returned. It is requested that you cooperate with the Bureau Office of Publications to the fullest extent so that all of our proof may be handled promptly."

TRAVEL BY AIRPLANE. We had occasion recently to ask as to the Bureau's attitude toward air travel, and quote below Mr. Allanson's letter concerning this:

".....I do not see how we can lay down any fixed rule governing the use of airplanes in connection with our work. It seems to me each case will have to be considered on its merits and in the light of decisions which we may have from the Comptroller General.

"Generally speaking, the determination will rest upon whether or not travel by airplane was more expensive or less so, and whether if more expensive the advantages justified the additional expense. Undoubtedly, there will be many cases where the use of the airplane is highly desirable. On the other hand, we must carefully differentiate between real necessity and a convenience or a personal pleasure. Where it does not increase our cost, or where it constitutes a real saving, there can of course be no objection. Where there is an added cost then we must carefully evaluate the advantages as against the cost."

Wherever the airplane is used, then, be sure to send along with your account a full letter of explanation regarding its use.

FLOWERS IN A COAL MINE ! If we may judge from a recent newspaper item, our experts on ornamental plants may have to extend their field of study. Already they are spraying plants from the air, and keeping pretty busy on the surface of the earth, but a new territory is opening up. The news item states that one of the workers in the No. 1B Mine at Glace Bay, Nova Scotia, planted a garden in the mine and the flowers lighted by electric lights, are flourishing 2,000 feet underground.

EDITORIALLY SPEAKING. John A. Ferrall

THERE'S A MAN IN THE HOUSE! Yes, the NEWS LETTER is celebrating its twenty-first birthday. Of course it is not twenty-one years old--merely twenty-one issues. Instead of calling this No. 21, we will start a new volume--and give the youngster a new suit and overcoat. Since the labor item is the real one in mimeographing, it is probably cheaper to use just one side of the paper. It is a good bit of a bother to get the sheets in proper order and the pages right when both sides are used. And the present cover is cheaper than the photographic (rotaprint) cover we have been using.

It is likely that those who clip and file the NEWS LETTER will find the present form better. And those who do not bother to read it at all can turn it over and use the blank pages for pencil notes--even news items for the paper itself!

One reader has suggested that we scatter the jokes throughout the NEWS LETTER instead of putting them all on one page, but I haven't succeeded in persuading myself that you would recognize that I meant some of the things for jokes unless I labeled them. If they are on the "In a Lighter Vein" page you know that at least I intend them to be humorous. Then, too, no one really knows when a joke is a joke.

There was a bank in California that had grown somewhat disgusted with the manner in which the people of its neighborhood fell for all sorts of get-rich-quick swindles. The officials finally thought they had a brilliant cure. They decided to burlesque and make fun of these schemes in such a way as to hold them up to ridicule. So they had a large poster lettered and placed in front of the bank:

A CAT RANCH.--A cat ranch is now being organized with 100,000 cats. Each cat will average twelve kittens a year. The cat skins will sell for thirty cents each. One hundred men can skin 5,000 cats a day. We figure a daily profit of \$10,000.00. What shall we feed the cats? We will start a rat ranch next door, with 1,000,000 rats. The rats will breed twelve times as fast as the cats, so we will have about four rats a day to feed to each cat. How shall we feed the rats? We will give them the bodies of the cats after the skins are removed. You see, we feed the rats to the cats, and then the cats to the rats, thus getting the catskins free!

Did it work? Not so that you could notice it. The bank received so many applications for stock that it was forced to take in the sign and try to explain the joke before the first day was over!

Under the circumstances, then, I feel that it will be better to continue segregating the so-called humorous material which, after all, is not really essential but added merely as a sort of sugar-coating in case the NEWS LETTER proper may now and then appear to be something of a pill.

IN A LIGHTER VEIN.

CHRISTMAS BELLS-- AND NEW YEAR'S BILLS! Christmas had come and gone--and Mother had received her lovely fur coat from Santa Claus, just as she predicted. A few days after, however, a harassed and weary looking man paused before a show window in which the Humane Society had an exhibit. There was a large picture of a furry animal with a woe-begone expression on its face. Underneath was a card: I WAS SKINNED TO PROVIDE A WOMAN WITH FASHIONABLE FURS. For a moment the tired expression faded from the man's face. "I know how you feel, poor chap," he muttered, "So was I!"

CHRISTMAS CAROL.

Oh, Mother baked a Christmas cake
To tickle Daddy's palate.
But Dad--he put it on a stake,
And used it for a mallet!

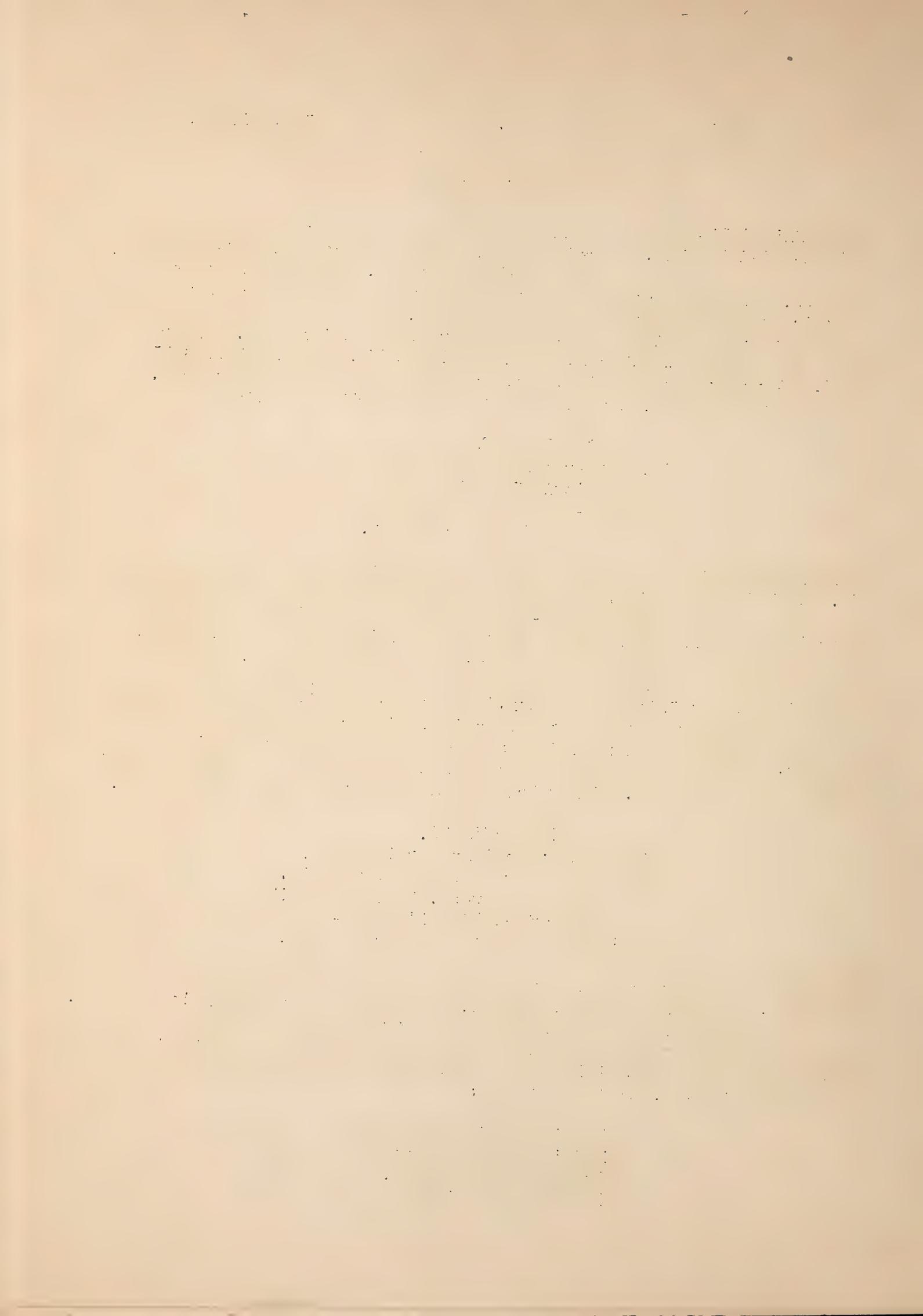
FLOATING KIDNEYS Vs. LOOSE LIVERS. A member of the scientific staff now working in Florida writes to me (his letter reaching me--as he planned--in the midst of a cold wave and snow storm) that he is working every day in his shirtsleeves, etc. Well, I'm working in my shirtsleeves, too--but not out of doors. And then he tells me of the darky down there who had been told that he was suffering from a "floating kidney." Much worried he begged his parson to ask for prayers from the congregation. The parson did not think it would be exactly dignified to ask for prayers for a "floating kidney"; he thought the congregation might make fun of it. "How come?" demanded the sufferer. "Only last Sunday you prayed for loose livers."

THE OPTIMIST.

There was an old farmer in Maine,
Whose legs were cut off by a train.
When they wept, "Oh, how sad!"
He cried, "But I'm glad--
See!--They cut off my varicose vein!"

WARNING! DYNAMITE! Apropos the success of one of our associates in breaking into the movies, even though it was only in connecting with his advising farmers regarding the dynamiting of peach trees to eradicate the phony disease, a reader tells me that one dynamiting party posted the following significant warning near its field of operation:

Willie found some dynamite,
Didn't understand it quite.
Curiosity never pays;
It rained Willie seven days!



PERSONAL MENTION.

DR. AUCHTER left Washington December 27th to attend the Twenty-First Annual Meeting of the American Association for the Advancement of Science, held at Des Moines, Iowa, December 28-31, and to confer with various groups of investigators, collaborators, plant pathologists, etc. at Des Moines and Ames, Iowa. Several other members of the scientific staff participated in the meetings and we hope to have a few notes and comments on papers read, etc., in the next issue of the NEWS LETTER.

F. L. MULFORD on a recent trip inspected the farmstead being developed at the Dairy and Livestock Experiment Station at Lewisburg, Tennessee, for the purpose of making studies on which to base suggestions for the laying out of the approaches to the farmstead, and the arrangement of the plantings. He also visited the Fruit Disease Field Laboratory at Fort Valley, Georgia, located on the farm formerly operated by the late J. H. Hale. Here the drives were located with a view to the future development of the station, and plans for ornamental plantings were prepared. Two weeks were spent in South Carolina during which nine counties were visited, in most of which the Home Demonstration Agents were assisted with their problems in farmstead improvement. Mrs. Dora Dee Walker, the State Specialist, was present at several of the conferences. Some places were visited where improvement work has been in progress from two to four years and wonderful changes were apparent. A three-day conference on home ground improvement was held in Charleston, at which were present, in addition to more than fifty people from Charleston county, seventy people representing thirteen other counties, and about twenty people from Savannah. A visit was also made to the Extension Office at Raleigh, North Carolina, and a talk on roses given before the Raleigh Garden Club.

FRANK P. McWHORTER, formerly with the Virginia Truck Crop Experiment Station at Norfolk, Virginia, has recently been appointed as agent in this office to succeed M. B. McKAY, in the conduct of the bulb disease work at Corvallis, Oregon. Professor McKay resigned several months ago as plant pathologist at the Oregon station, to engage in commercial bulb production. Dr. McWhorter has been associated with the Bureau of Plant Industry as a collaborator of the Plant Disease Survey, and during the past summer cooperated with this office in a study of narcissus basal rot in Virginia.

GEORGE M. DARROW attended the strawberry conference at Monett, Missouri, in December. At this meeting steps were taken to form a regional council of the strawberry industry for Missouri and Arkansas.

DAVID GRIFFITHS returned to Washington December 22, after a visit to points in South Carolina, Florida, Georgia, Mississippi and the Gulf States generally in connection with his bulb culture investigations.

WALTER T. SWINGLE, principal physiologist, left December 19 for California, after spending two months in Washington conferring with administrative officers and planning field work for the rest of the fiscal year. Before leaving he delivered an address at the December meeting of the Botanical Society of Washington, illustrating with motion pictures and lantern slides some of the features of his work with the date palm. Views in Old World date regions were shown along with pictures taken in the date gardens of California. After the address the audience was given an opportunity to sample specimens of American-grown dates, and Dr. Swingle supplemented these with "tangelo-ade", an extremely pleasing drink made from the juice of the tangelo--a hybrid between the grapefruit and the tangerine orange. The refreshment program included still another distinctive horticultural triumph--persimmon ice cream!

NEIL E. STEVENS spoke at the same meeting on "Forecasting the Keeping Quality of Cranberries," and had an exhibit of sixteen varieties of this fruit.

F. S. BEECHER has been transferred from Riverside, California, to the Arlington Experiment Farm (Virginia), in connection with tomato disease investigations.

HENRY F. BAIN visited Chicago late in December to examine lots of cranberries in storage, to make counts, and to secure rotten berries from which cultures will be made.

T. RALPH ROBINSON left Washington December 17, for Florida and the Gulf Coast region where he will take notes on the progress of field experiments in connection with the testing of Citrus hybrids and stock plants; will study the behavior of various strains of the Satsuma orange; and conduct incidental studies on avocado pollination.

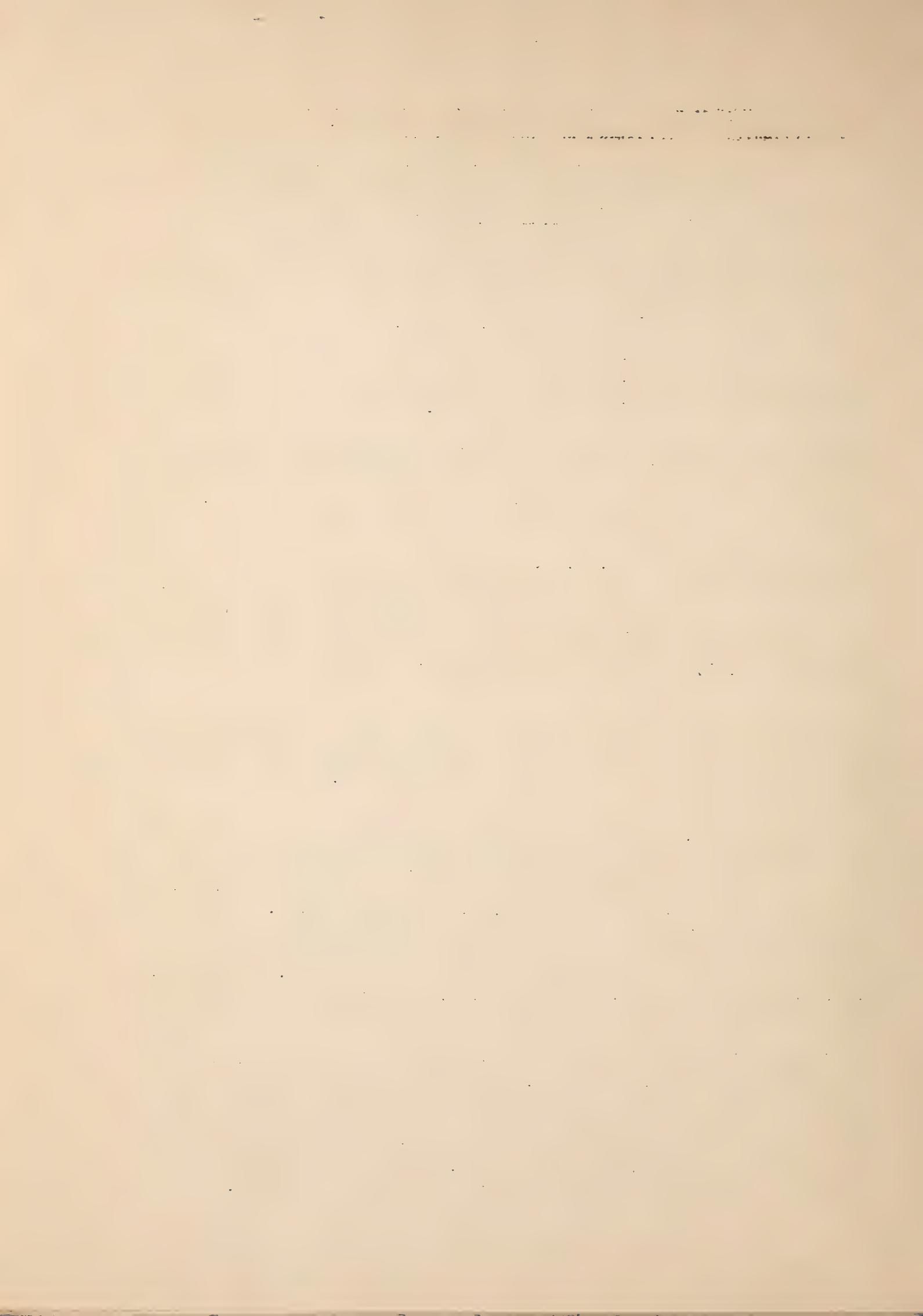
W. C. EDMUNDSON has been in Washington attending conferences of Bureau officials for the discussion of results and the planning of future work in vegetable variety type studies.

A. M. JACKSON visited the Pee Dee Station at Florence, South Carolina the middle of December to harvest peanuts from the experimental tracts.

E. A. SIEGLER is visiting points in Delaware and Maryland in connection with his investigations on crown gall of nursery stock.

R. C. WRIGHT spent the latter part of December in Maryland, Delaware, Ohio, Pennsylvania and Illinois, conducting transportation tests with Christmas holly.



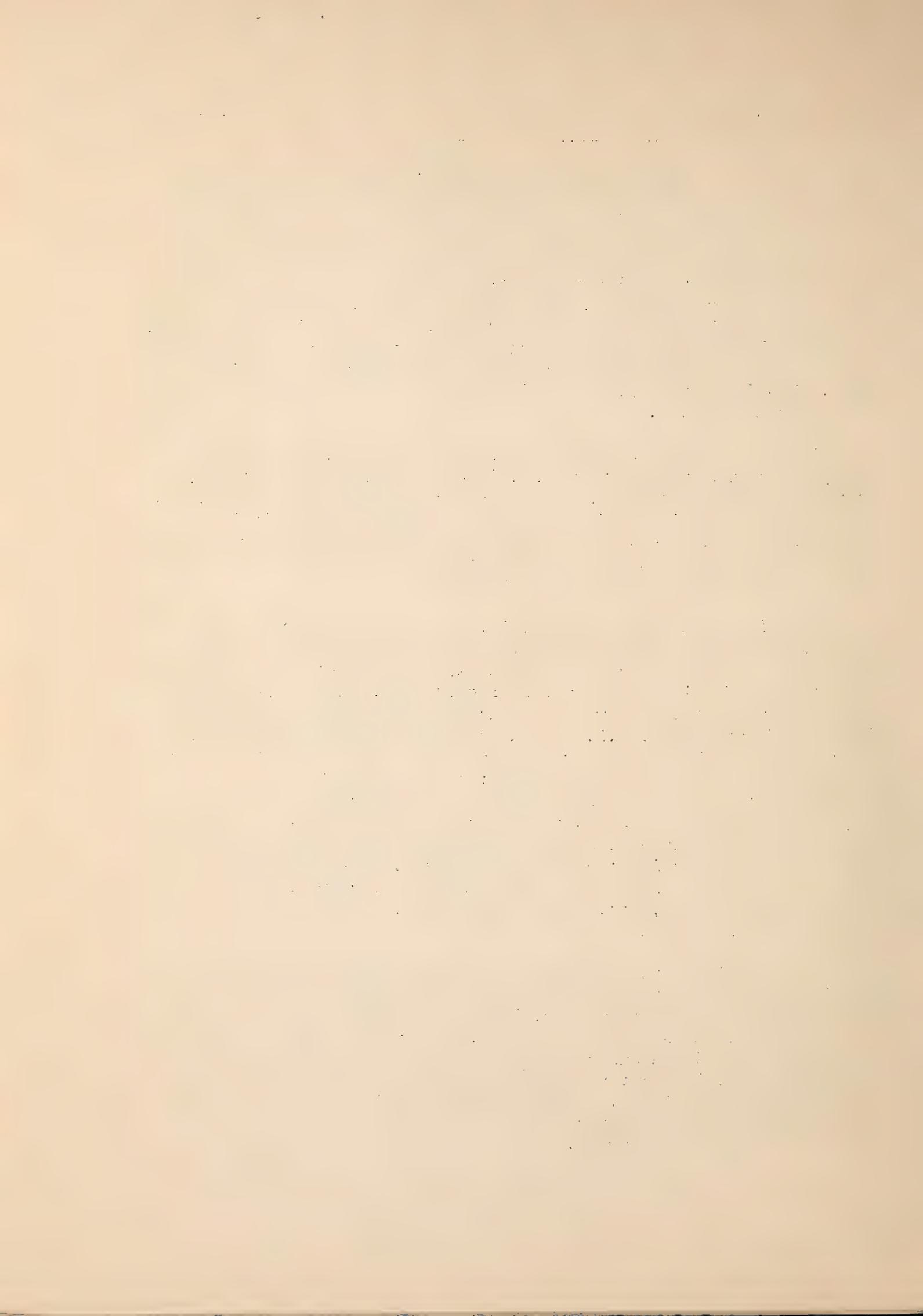


Dr. Orton's connection with the Federal Government began June 1, 1899, two years before the Bureau of Plant Industry was established, and up to the time of his resignation in 1924, he was associated in a constructive way with the activities of the Department, particularly with those lines related to plant pathology. In 1901, with the formation of the Bureau of Plant Industry, Dr. Orton became the head of the office which, under his expert and stimulating guidance grew into the office of Cotton, Truck, and Forage Crop Disease Investigations. The Plant Disease Survey was organized and for several years conducted by him, until it reached such size that it required one man's full time. Dr. Orton also played an important part in the passage of the Plant Quarantine Act.

Like the botanists of old who were medical men who turned to the plant world for diversion, Dr. Orton, the plant pathologist, turned to medicine though not so much for an avocation as for necessity; but out of his studies of plants he gained the enviable reputation of being the authority on food plants suitable for diabetics and neurotics, offering to those affected a more varied and suitable diet than had formerly been thought possible.

In spite of his many duties, Dr. Orton was an ever enthusiastic and working member of many scientific societies and clubs, among which might be mentioned the American Association for the Advancement of Science, of which he was a former councilor; the American Phytopathological Society, of which he has been president; the Botanical Society of Washington, D.C.; the American Horticultural Society, of which he was a charter member; the Washington Academy of Sciences; the Society of Horticultural Science; the American Society of Naturalists; the International Society of Soil Scientists; the Société de Pathologie Végétale; the Society of Foresters; the International Society of Sugar Cane Technologists; the World Agricultural Society; the Cosmos Club; and Phi Beta Kappa. His publications, largely on subjects related to plant pathology, comprise 40 or more bulletins, circulars, etc. of the Department, not including numerous papers in magazines and scientific journals.

A broad vision and clear judgment coupled with outstanding and original ability in the formation of sound workable plans for the accomplishment of results made Dr. Orton many friends in this country and Cuba, where he a frequent visitor, and in other Latin American Countries. His death has closed one of the most courageous fights to overcome physical handicaps, a fight that has for years been the marvel of his associates. In spite of physical handicaps he was an indefatigable worker and accomplished important results in his 30 years of professional career.



THE IOWA MEETINGS

The meetings of the American Association for the Advancement of Science and associated societies at Des Moines, Iowa, from December 27 to January 2, were in many ways the most successful ever held. More than thirty independent scientific societies met with the Association, those interested in horticultural activities including the Botanical Society of America, the American Society for Horticultural Science, the Potato Association of America, and the American Phytopathological Society. The general program, on which members of the scientific staff of the office were well represented, covered a much larger number of papers than arranged for any previous meeting. These were roughly divided into two classes--specialized talks for the general sessions of the different societies, and a group of non-technical lectures of a popular nature. An added feature of the meetings was the general science exhibition.

DR. MAGNESS (with F. L. Overley of Wenatchee, Washington) contributed two papers to the American Society of Horticultural Science meetings, the first discussing the leaf area in relation to size and color of fruit, and the second the effect of fertilizer on shipping quality of fruit. C. P. CLOSE had a paper on the larger results of horticultural extension; GEO. M. DARROW reported on the effect of light, temperature and transpiration on elongation of raspberry canes; and DR. BOSWELL discussed first year's work upon standards and descriptions of American varieties of vegetables. We hope to present a somewhat full outline of these papers in future issues.

WM. STUART, as chairman of the research committee, made his report at the first session of the Potato Association of America meetings on December 30, and the following morning contributed to the program an interesting historic resumé of the improvement of the potato since its discovery--a paper which we expect to summarize later. An especially interesting feature of the meetings of the Potato Association was the display of potato seedlings developed by the U. S. Department of Agriculture and several of the State Experiment Stations.

The Twenty-first Annual Meeting of the American Phytopathological Society, of which F. C. MEIER is secretary, opened on the morning of December 28 with invitation papers by Dr. R. P. White, pathologist of the New Jersey Agricultural Experiment Station and Dr. Christine Buisman of the University of Utrecht. Dr. White declared that the disease of ornamental plants offered the greatest future for investigation-al work in plant pathology and that future growth in this field is dependent upon greater appreciation of the value of ornamental plants. Dr. Buisman discussed the Dutch elm disease. Through the courtesy of F. C. MEIER and W. A. WHITNEY the editor has been supplied with complete abstracts of the Phytopathological Society meetings, from which liberal extracts are made in the following pages.

The sessions of December 30 were held at Ames, Iowa, where the visiting scientists were the guests of the Iowa State College and Iowa Agricultural Experiment Station. The day was made memorable by a joint session with the Society of American Bacteriologists, presided over by Dr. Ludvig Hektoen, director of the John McCormick Institute of Chicago, representing the bacteriologists, and Dr. L. O. Kunkel, of the Boyce Thompson Institute for Plant Research, representing the pathologists. The symposium featured recent advances in virus diseases of plants and animals from both the pathological and bacteriological points of view. December 31 featured a meeting devoted to the recent advances in the study of various fungi. The following paragraphs briefly summarize papers contributed during the meeting that are apt to be of interest to our personnel:

R. H. Porter reported a new mosaic disease which he has tentatively called "Bettendorf mosaic", in honor of Bettendorf, Iowa, where the disease was first seen. The symptoms are rigid terminal leaves and yellow blotches on the leaves, first distinct but later merging with one another. No visible symptoms appear on the cucumbers themselves. The disease occurs on all cucumbers, including the Chinese Long (normally resistant to the white pickle mosaic), and the watermelon and stock citron may be infested. In a second paper he reported that individual, mass-selected plants of Chinese Long cucumbers, as well as inbred strains of the same variety, are highly resistant to the white pickle mosaic disease. Three successive inoculations of these plants with the virus of the disease failed to produce the symptoms.

Poultry men in the Petalumn district, Sonoma County, California, who feed the Jersey kale to their chickens as a green food are hard hit by a new disease called yellows, said Dr. James B. Kendrick, pathologist of the California Experiment Station at Davis. This disease, caused by the same organism that produces the disastrous yellows of cabbage, is widely distributed in this district and many ranchers are being forced to find a substitute for poultry greens. The disease is not known to occur outside of California.

Collections of Fusarium conglutinans from eleven localities in eight states proved to be identical regarding their effect on cabbage and related plants when tested at Madison, Wisconsin, by L. M. Blank, assistant in pathology at the University of Wisconsin. There was no evidence that one collection was any more infectious on cabbage, brussels-sprouts, cauliflower, kale, or kohlrabi than any other collection.

Losses amounting to as high as 100 per cent of the crop and decay in shipment from 50-100 per cent is reported by C. B. Ramsey and Alice A. Bailey, pathologists of the Department, stationed at Chicago, to have occurred in the California tomato crop during the past few years. Infection occurs on the vines as well as on the fruit, On the fruit the infection takes place at the stem scar, the spots appearing in about four days as light-brown, water-soaked blotches. Transit experiments show an average radial increase of two-thirds of an inch in four days. The rate of development decreases with increase in size of the lesions. Spots held two days following four days transit showed an average radial increase of one-eighth of an inch in that two day period. There is practically no spread of the disease in transit. But even though no external signs are visible when the fruit is packed, they may still be infected and that infection develop to a point where the shipment is one-third worthless in only eight days.

Yellows resistance in cabbage is inherited as a dominant character, declared Dr. J. C. Walker, pathologist of the University of Wisconsin, High air temperatures increase the rate of disease development in susceptible and mass-selected resistant strains but fail to break down the resistance of the selected resistant ones.

Yellow dwarf of onions, discovered in 1927 and reported in epidemic form in the Pleasant Valley, Iowa, district in 1928, can be detected by "indexing" samples, stated W. J. Henderson, pathologist with the Iowa Agricultural Experiment Station. This method, recently devised for detection of degeneration diseases in Irish potatoes, consists in planting representative samples of commercial lots of sets and determining the amount of yellow dwarf in the test. Different tests revealed percentages of stunting, crinkling, yellowing, and dropping of the leaves -- symptoms of the disease--to the extent of 0 to 95. The greenhouse tests were corroborated by actual field performance of the lots tested.

The mechanics of the inheritance of resistance to the smudge disease of onions was detailed by G. H. Rieman, agent of the Department at the University of Wisconsin, who stated that there were factors for the red color, the yellow, the white, and a factor which prevents the showing of color. The interplay of factors results in the color of the onions and in the resistance to the smudge disease. In hybridization studies Rieman was able to develop a white onion that showed a degree of resistance to smudge that was intermediate between the susceptibility of the white commercial varieties and the red ones.

From experimental results on the control of sweet potato stem rot, Duke V. Layton showed that mercuric chloride, semesan, and corona PD7 increased the percentages of healthy plants in the field as well as the total yield over that of the untreated.

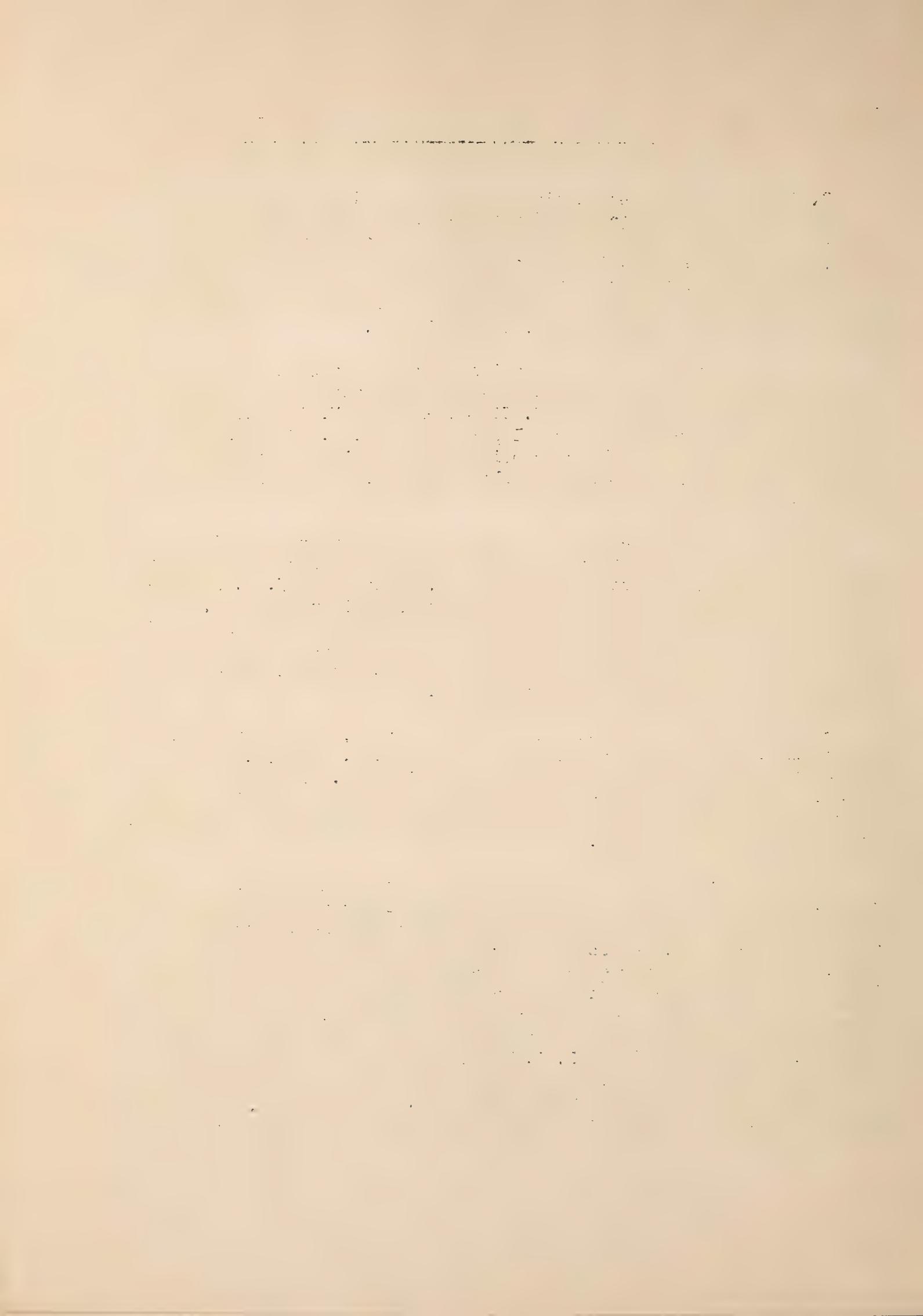
D. H. Porter reported on his studies on the difference between strains of the causal organism of watermelon wilt from various localities. Although these strains can all be catalogued as the same thing, there are marked differences in their rate of growth, amount of spores produced, the type of pigmentation, and even in details of structure and form. The more of the fungus there is in the soil, the greater the rate of seedling wilt, stated Porter.

Inbreeding and natural segregation of watermelons has led to further isolation of strains having greater resistance to the destructive wilt disease, announced J. J. Wilson and Duke V. Layton, pathologists of the Iowa Agricultural Experiment Station. One special strain was obtained from the susceptible Klecklet Sweet variety in 1927 and the progeny of 22 inbred melons showed 9 to 73 per cent resistance in the 1929 tests.

Texas root rot spreads best in soils slightly alkaline and the nearer neutral and the more acid a soil becomes, the less the disease affects the plant, announced Drs. Walter M. Ezekiel and J. J. Taubehaus, pathologists of the Texas Agricultural Experiment Station. Tests conducted to determine the advisability of the acidification of soil by the use of acid fertilizers and sulphur indicate that it is impractical to acidify highly calcareous soils and that injuries must be guarded against with the use of sulphur.

Slimy rot of head lettuce is a field, transit, and storage disease which causes a large annual loss, stated J. G. Brown, pathologist of the Arizona Agricultural Experiment Station. It has been produced in healthy lettuce plants by inoculation and the organisms again re-isolated. Recent studies disclose certain conditions of the lettuce plant which favor infection.

Bacterial canker of tomatoes has spread in recent years, said Mary K. Bryan, of the Office of Horticultural Crops and Diseases, to the southern and western states where it has caused heavy losses to canners and market gardeners by reducing both quality and quantity of fruit. Often a large percentage of plants are killed before setting fruit. In other cases, fruit spot has seriously reduced the amount of marketable fruit where the vines had set a fair crop. Spotting of leaves and stems also occurs but appears to be of less economic importance. Miss Bryan, (with O. C. Boyd, pathologist on the Georgia State Board of Entomology), stated also that since the causative agent of tomato canker is entirely within the seed, seed treatment with mercuric chloride or other chemicals is not entirely effective.



The organisms causing the black rot of cabbages and related plants and the slimy soft rot of vegetables has been found to be disseminated by the cabbage maggot, said Reiner Bonde, pathologist with the Maine Agricultural Experiment Station. He also stated that adult flies of the seed-corn maggot, caught in the open, do not infect potato seed pieces by direct contact.

The determination of the role played by various insects, especially plant lice, in the transmission of plant-disease-producing viruses is of fundamental and practical interest, said Dr. Isme A. Hoggan, pathologist of the University of Wisconsin. From greenhouse tests she was able to transmit tobacco mosaic from diseased to healthy tomato plants by using plant lice, although the lice were incapable of transmitting the same disease from tobacco to other plants.

Even though it were known what causes tomato mosaic, it could not be arrested in a speeding charge, for W. A. McCubbin, pathologist and Dr. Floyd F. Smith, entomologist, of the Pennsylvania State Department of Agriculture, have shown that it spreads through the plant at the rate of two- to four-fifths of an inch an hour!

From bean leaves affected with mosaic and apparently healthy leaves of very susceptible varieties, Ray Nelson, pathologist of the Michigan Agricultural Experiment Station has isolated a minute organism which he claims destroys the green color-bearing bodies of the leaves.

Studies of tomato streak in Wisconsin shows that three distinct forms exist, stated Drs. S. P. Doolittle and H. L. Blood, pathologists of the Department, stationed at Madison, Wisconsin. One of these forms is the familiar one produced by the combination of tomato mosaic and the juice of potato. The other two forms, while of unknown origin, do not appear to contain the potato factor. The potato combination and one of the other two forms produce a marked leaf necrosis and streaking of the stem, while the remaining form produces a severe stem streaking with occasional inconspicuous leaf injury. The juice of plants affected with the potato combination loses its power to infect when it is heated from 149 to 158 degrees and when it is kept in glass longer than 14 days. One of the other forms lives for at least 180 days away from the plant.

Too violent action of threshing machines is responsible for 50-80 per cent cracked lima-bean seeds, declared W. A. Whitney. Weather conditions of high temperature and low humidity make the seed more brittle than customary, and this, of course, makes it more liable to injury during threshing. While this injury cannot be entirely prevented, greater attention to the speed of threshing machines would reduce the amount of injury.

To determine accurately the distribution of copper dusts or sprays on leaves, Dr. F. M. Blodgett and E. O. Hador, pathologists with Cornell University, have devised an ingenious method whereby chemical reactions result in colors which are coextensive with the protective covering. Paper with no traces of iron compounds is thoroughly soaked in a mixture of potassium ferrocyanide and acetic acid and then, while the paper is still wet, but with no superfluous liquid, already dusted or sprayed leaves, slightly wilted, are placed between the wet papers. These are then placed between pads of cotton and pressed for about ten minutes, after which the sheets are removed and washed to remove excess chemicals, and then dried. The dried papers form a permanent record. The areas of the leaves covered by the copper are represented by brown color and, if iron is present, a blue color will be noticeable.

The bacterium causing the halo blight of beans is identical with the one which causes a halo blight of kudzu, says Miss Florence Hedges. During a survey trip in the west she found halo blight on beans and, struck with the similarity between this disease and the one on kudzu, she suspected that both were caused by the same thing. This supposition was borne out by comparative tests in the laboratory with the two bacteria. Miss Mary K. Bryan has found a pure white sport strain of the organism causing tomato canker in the otherwise yellow bacterium. The white sport will cause the same symptoms as the yellow form when inoculated into tomato and will react to laboratory tests in a normal way. Dr. G. B. Ramsey and Mrs. Alice A. Bailey found that ultraviolet light acts as a stimulant to the production of more and better spores in the organisms causing the nailhead rust of tomatoes and the Fusarium bulb rot of onions, two destructive transit diseases.

Dusting peaches with sulphur, whether the fruit is brushed to remove the fuzz or not, is effective in controlling the brown rot in storage, stated M. A. Smith, pathologist with the Crop Protection Institute stationed at Champaign, Illinois, providing the peaches are kept at temperatures between 40 and 55 degrees. At temperatures above 65 no control was obtained in any of the experimental lots.

Yellow leaf, one of the most serious diseases of cherry trees in Iowa nurseries, causes premature defoliation which results in a severe checking of rapid growth and proper maturity, stated Donald E. Bliss, pathologist of the Iowa Agricultural Experiment Station. Of the thirteen fungicides tested, bordeaux mixture with the addition of kayso, a calcium caseinate spreader, was outstanding because of its ability to wet the youngest leaves and to deposit an unbroken layer of fungicide which was not easily removed by rains.

Small galls on the canes of the black raspberry were attributed by W. M. Banfield, of the scientific staff of this office, stationed at the University of Wisconsin, to a bacterium similar to that which produces the disastrous crown gall. The disease appears on the fruiting canes as very small spherical galls or elongated ridges of white granular gall tissue. These galls may increase in size and number until they completely cover portions of the cane surface.

Seasonal development studies of crown gall and hairy root of nursery apple trees were conducted during the major part of the growing season of 1929 at Topeka, Kansas, stated Drs. A. J. Riker, E. Hilderbrand and C. W. Keitt, pathologists of the University of Wis. The natural beginning of hairy root was comparatively slight before the first of August, but increased thereafter and seemed to be correlated with the rapid increase in the diameter of the trees. No naturally occurring crown gall was found on the trees examined. When correlated with the incubation periods following inoculation, these results suggest that under conditions of the work the critical period for infection by hairy-root organism occurs not at the time the grafts are made but following the middle of June. However, the possibility of extended incubation periods deserved further attention. Infection occurred only through wounds which ordinarily remained open for only two days. Little if any infection was secured through the uninjured callus.

That peach yellows and the mosaic of potatoes may be the same thing was hinted at by Dr. Gilbert L. Stout, botanist with the Illinois Natural History Survey. According to Dr. Stout, peach trees with yellow-green or exceedingly pale leaves showing considerable greening around the veins were found to be growing in close proximity to potato fields and other garden plantings.

Selections of asters for wilt resistance again gave satisfactory results, said Drs. L. N. Jones and Regina S. Riker, plant pathologists from the University of Wisconsin, which corroborates the progress report made last year in New York. Promising resistant strains are in hand, they assure aster growers, of all colors in the types which commercial florists prefer. Trials made on "sick" soil confirmed the resistance of strains selected in the East and indicate that the disease as it occurs in California is identical with its eastern confrère. The use of inclosures covered with cloth having 22 threads to the inch in each direction they found still to be effective in excluding the leaf hopper which is responsible for the dissemination of the disastrous yellows disease. Cloths with fewer threads to the inch proved utterly useless for protection. Commercial florists have found that covering areas with the recommended cheesecloth is both practical and profitable for out flower culture.

Tomatoes were reported by Dr. L. O. Kunkel, pathologist of the Boyce Thompson Institute for Plant Research, Yonkers, New York, to be liable to infection by the virus which causes aster yellows. A diseased condition of tomatoes in Maryland which appeared to be aster yellows was proved to be such through experiments conducted with bud grafts. A number of relatives of the tomato may become infected with aster yellows and wild tobacco infected with yellows was used as the stock on which healthy tomato buds were grafted. The subsequent tomato growth became infected with the virus of aster yellows.

For at least four years an infectious chlorosis of the rose has been present in the commercial greenhouses of Michigan, announced Ray Nelson, pathologist of the Michigan Agricultural Experiment Station, and a survey has revealed that the disease is increasing in importance. The malady is generally present on certain varieties and extensive losses have occurred. A loss of nine thousand plants of the Matchless variety was seen on one occasion. The disease causes a stunting of the plant, the formation of midget or malformed leaves, curling and leaf mottling of various degrees from faint to mosaic speckling to extensive chlorotic areas along the veins. Flower buds on diseased plants are nearly always imperfect and salable flowers are seldom produced. The disease has been found on a number of varieties of the popular Hybrid Tea roses and has also been noted on Pernetianas and hybrid Pernetianas. The disease is also being widely disseminated through the shipment of affected Manetti strains and Ragged Robin understocks. The percentage observed in western plantings of these Ragged Robin understocks has been from ten to one hundred. The disease has been transmitted by budding and grafting on infected understocks but not by insects.

EDITORIAL NOTE.--The abstracts of the papers presented at the Twenty-first Annual Meeting of the American Phytopathological Society, held in connection with the American Association meeting at Des Moines, seemed to be of such interest for our pathological workers that it was originally planned to make this a Phytopathological issue. Dr. Orton's death, however, demanded notice because of his long association and valuable contributions to the development of the office. And it was thought best to at least mention some of the papers of the American Society for Horticultural Science and Potato Association meetings, of which it is hoped to print from time to time rather full summaries. The Phytopathological Society was given first call simply because the abstracts of its proceedings were available in time for this issue. We hope our readers will agree with us that the material is of a type that justifies the omission of the regular features of the NEWS LETTERS from this issue.

---John A. Ferrall

THE OFFICE OF HORTICULTURAL CROPS AND DISEASES

SEMI -- MONTHLY NEWS LETTER

The Official Organ of the Office of Horticultural Crops and Diseases,
Bureau of Plant Industry, United States Department of Agriculture.

John A. Ferrall, Editor

All material in this NEWS LETTER is confidential, and is not to be
published without the prior approval of the Office of Horticultural
Crops and Diseases.

Vol. II

Washington, D. C., February 1, 1930

No. 3

POTATO DISCUSSIONS AND EXHIBITS AT DES MOINES MEETINGS. WM. STUART, who attended the Sixteenth Annual Meeting of the Potato Association of America, which was held at Des Moines, Iowa, December 30, 31, and January 1, inclusive, reports that the meeting was one of the most interesting that the Association has ever held. Six sessions were held, one of which was a joint meeting with the vegetable section of the American Society for Horticultural Science, and two with the Iowa Vegetable Growers' Association.

Some of the more striking features of the program were a group of papers on seed potato certification; potato production costs; dietary value of the potato; potato breeding; cultural practices; relative value of the mother seed piece to the growing plant; chemical treatment for the prevention of sprout tuber formation; methods of potato disease prevention or control; disease transmission and disease elimination methods; soil influence on vigor of seed; influence of photo-period upon seed potato stock; market forecasting; production of record yields; relation of the Federal Farm Board to the potato industry; and causes and prevention of mechanical injuries resulting from harvesting, storing and marketing potatoes.

An exhibit of seedling potatoes, consisting of 65 plates, by this office; 30 from the horticultural department of the Minnesota Agric. Exp. Station; 6 from the farm crops division of the Michigan Exp. Sta.; and several trays, representing large tuber yields from individual seedling plants, from the department of horticulture and forestry of the Iowa experiment station, attracted much attention, and was critically examined by those interested in the improvement of the potato.

NORTHWESTERN
PERSONNEL
ACTIVITIES.

"You may be interested to hear further from the Northwestern personnel of the Transportation, Handling and Storage Project," writes H. C. DIEHL.

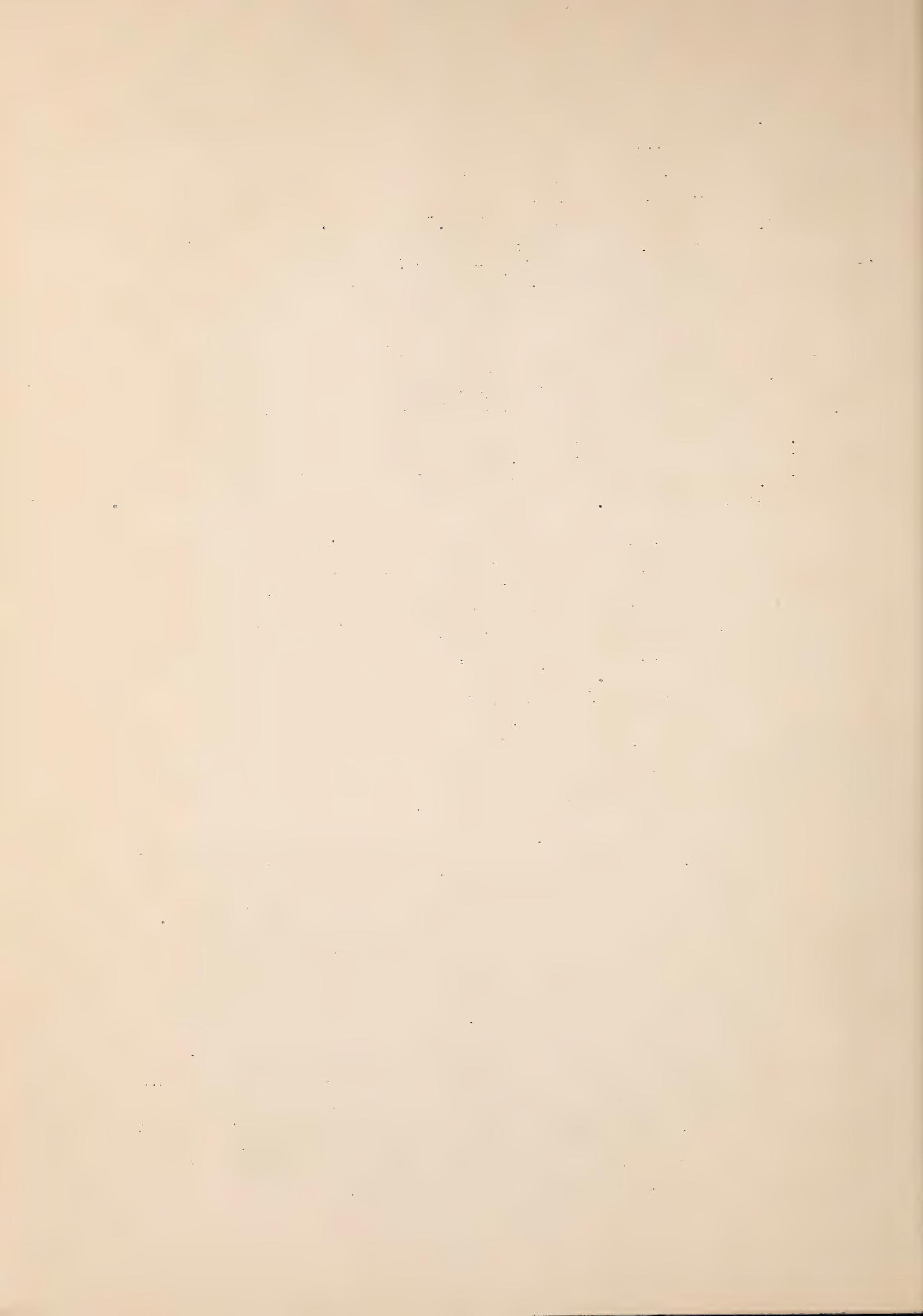
"Lutz, who explained to growers in Missouri, Arkansas, Utah and Idaho, how to clean fruit, came to Seattle during early December and assisted us for several weeks in our critical examination of the two thousand odd lots of frozen pack fruits and vegetables.

"Ezell, after completing the spray residue removal experiments in Yakima, also assisted in the frozen pack work and conducted at intervals some cuttings of his Bartlett pear pack, which he prepared during the summer in cooperation with some Yakima pear growers and packers. The object of this work is the determination of relation of canned Bartlett pear quality to harvesting maturity and storage prior to canning. He reported this work at the Washington State Horticultural Association meeting.

"Ryall conducted the spray residue removal "extension" work in Idaho, and took a very active part in the residue removal experiments at Yakima, which have not been entirely completed as yet, particularly the work dealing with improved solvents for cleaning waxy and oil sprayed fruit bearing high residue loads. The Bureau of Chemistry and Soils representatives, Fahey and Gross, stationed at Yakima, have been very helpful in this work. Ryall also reported his work on prune maturity and storage at the State Horticultural meeting at Yakima. Simler, who helped us temporarily, has left us, but assisted several times during the late residue removal work on his own suggestion and without remuneration, which fact impressed me as an example of the very fine helpful spirit shown by all of the fellows who have worked with me in the Northwest during the season.

"My own activities have been spread around over all this work, but most of our time has been taken up with the examination and preparation for Eastern cuttings of the frozen pack, with the development in the apple industry itself of a more organized and systematic fruit cleaning program and with the residue removal experiments themselves. In Wenatchee we began a cooperative study with Garver and Overley of the State Experiment Station, dealing with the corrosion problems emphasized by the necessity for warming acid cleaning solutions, and with a study of solution heater types.

"Ryall and I attended the annual meeting of the Western Cooperative Oil Spray Project, which is an informal cooperation of investigators in the West who are studying various aspects of oil sprays and their application. The reports of the different groups were summarized and discussed, suggestions for the safe and proper use of oil sprays were prepared and a meeting was held, to which the commercial oil and insecticide company representatives were invited."



FUNGUS CULTURES. The fungus section of the American Type Culture Collection is now being operated by the Office of Mycology and Disease Survey. Under the terms of the cooperative agreement between the Bureau of Plant Industry and the American Type Culture Collection, provision is made for supplying transfers of any of the cultures in the collection to Bureau workers for their official work. The Office of Mycology and Disease Survey wishes to offer this service to the pathologists and other workers of the Bureau interested, and to request that transfers of available species not now represented be donated to the collection. It has, unfortunately, not been possible as yet to obtain many common species and the cooperation of those in the Bureau who handle fungus cultures is earnestly desired. Inquiries relative to the collection may be made of John A. Stevenson, Mycological Collections, Bureau of Plant Industry, Washington, D. C.

GREELEY, COLORADO. "The Twenty-Third Annual Weld County Farmers' Institute and Seed Show was held January 8, 9 and 10th at the County Court House," writes W. C. EDMUNDSON. "A good program was offered and the attendance was excellent. At some of the sessions standing room was at a premium.

"One of the principal objects of the Seed Show was to bring together the grower and the purchaser of seed. At the close of the show this year there practically no seed left unsold. Several growers of certified seed from the northeastern part of the country attended. On January 9 the annual farmers' and merchants' smoker was held, this being given annually by the Greeley Chamber of Commerce for the farmers. After a very entertaining program, food was served to about 750.

"January 13 to 16, the Fifteenth Annual Extension Conference of the Colorado Agricultural College was held at Fort Collins; and on February 13, 14 there will be held in Greeley an economics conference of agricultural leaders representing counties comprised of the northern Colorado irrigated section. This conference is for the purpose of analyzing the present situation in the various branches of farming and if possible a draft of program for the entire section will be prepared from the information received. Seventeen counties will make up the conference. The writer has been asked by the Agricultural College to serve on the potato committee.

"Colorado is experiencing a very cold winter, with many light snowstorms, the minimum temperature each night reaching from a few degrees above zero to 12 to 14 below."

**INSECT AND
DISEASE
CONTROL.**

"Insect and disease control problems always confront the fruit and vegetable producer," said a Department staff member in a Radio "Farm Flash" recently, "but the winter months are important especially in the control of scale insects of deciduous fruit trees. Regardless of the method of control employed, whether it be spraying, dusting, fumigation or otherwise, there is the necessity for the possession of supplies and equipment with which to do the work. How often do we see the fruit or vegetable grower confronted suddenly by a serious problem of insect or disease control and the facilities for effecting the control either inadequate or lacking entirely! Materials for use in spraying or dusting should be on hand in ample time, spray or dusting equipment overhauled and in perfect working order, and everything in shape for prompt action when the necessity arises.

"Other problems such as seed supply, nursery planting stock, fertilizers for the midwinter and spring crops and a host of other matters call for attention at this time of the year. Then there is the question of improving strains and varieties of the crops we are growing, which may well be considered at this time."

**STRAWBERRIES
AND CREAM
EMBELLISHED
BY U.S.**

This recent newspaper headline had reference to the Blakemore strawberry, originated by GEO. M. DARROW, senior pomologist, by crossing the Missionary and Howard 17 (Premier) at Glen Dale, Maryland, back in 1923. The Blakemore is a tart berry of the Missionary type with foliage more resistant to disease than either parent. It also has a firmer berry than either and does not puff and become soft in hot, moist weather.

The berries are a light, bright-red color, and do not turn dark on holding, which makes this hybrid well adapted to preserving and marketing purposes. It is recommended for culture in the eastern North Carolina section northward to New Jersey, and is also suggested for trial in all regions where either the Klondike or Missionary varieties are grown, as well as in the southern part of the regions where the Howard 17 is grown.

This new creation is described by Dr. Darrow (with George F. Waldo) in U.S.D.A. Circular No. 93--The Blakemore Strawberry--which contains an excellent color plate showing typical shape and color of the Blakemore and its parents. Commenting on the publication, and the hybrid, the newspaper item referred to says "That delicious dish--strawberries and cream--will be even better this year if the U. S. Department of Agriculture has anything to do with it."

SHIPMENTS BY
EXPRESS.

We have just received from the Office of the Chief Coordinator Supplement No. 1, cancelling paragraphs 5 and 6 of Section VII, SHIPMENTS BY EXPRESS, of Bul.107, issued January 2, 1929, and substituting the following Par. 5 therefor:

5. While the value marked on packages and shown on bills of lading is subject to the regulations of the department or establishment making the shipment, inasmuch as it is the practice of the General Accounting Office to audit express bills with due regard to the actual or replacement value of the shipment, in order to avoid disallowances and adjustments and delays in making settlements, the following procedure is recommended to be followed in all cases:

a. Release value not exceeding \$50.00. When shipments via express are tendered at released value rates, the carrier's liability for loss or damage is limited to an amount not exceeding \$50.00, or not exceeding \$.50 per pound actual weight, as the case may be. Should the actual value exceed the released or limitation valuation, loss, if any, falls under the shipper.

b. Value in excess of \$50.00. When, in the judgment of a department or establishment making shipments, it would appear to be to the interests of the Government to place a higher valuation than that of the released valuation of \$50.00, or not exceeding \$.50 per pound actual weight, the value so stated must not exceed the actual, replacement, or recoverable (invoice) value.

c. The value of the shipments, whether released value not exceeding \$50.00 or in excess of \$50.00, must be inserted on the bill of lading and marked on the package or packages by the Government representative charged with making the shipment.

d. When a shipment consists of more than one package the value, released or declared, should be marked on each package as follows: "Value, \$ _____ on X", X representing the number of packages in the shipment."

Bureau of Plant Industry Memorandum No. 237 calls attention to delays in submittal of reimbursement and other vouchers and says: "You are requested to see that all accounts be submitted monthly, and in no case be delayed beyond thirty days after the close of a quarter." This refers to reimbursement or travel vouchers. ".all white vouchers must be submitted promptly and not later than within 60 days after the incurring of the obligation." VOUCHERS DELAYED BEYOND THE PERIODS MENTIONED AND WHICH ARE NOT ACCOMPANIED BY A SATISFACTORY EXPLANATION CANNOT BE PASSED FOR PAYMENT.

THAT REMINDS ME--

THAT two copies of all vouchers, two copies of itinerary reports, and three copies of statement covering the use of personally-owned automobiles are to be submitted. Vouchers covering purchase of gasoline, the price of which includes State tax, are to be in triplicate.

THAT all vouchers are to be mailed to Mr. R. K. SWARTZ. Quite frequently vouchers have been sent direct to the Office of Accounts of the Bureau of Plant Industry, and this delays settlement.

THAT Form 1034 vouchers (white vouchers) covering purchase of materials should show the use made of the materials.

THAT vouchers for repairs should indicate whether the repairs are to buildings or equipment--AND WHETHER SUCH ARE GOVERNMENT OWNED.

THAT personal service charges IN EVERY CASE are to be rendered on Form 1013-D, not on Form 1034.

THAT if the Government Bill-of-Lading covering a shipment sent to you is not received by the time the shipment arrives, the fact should be reported to this office (to Mr. SWARTZ) immediately in order that the necessary papers to secure the shipment may be furnished you, thus avoiding the necessity of incurring storage charges.

THAT no expense of more than \$50.00 for services (other than personal services) or purchases should be incurred before FIRST securing formal bids from competing firms or individuals, such bids to be passed upon by the Board of Awards in Washington.

THAT in the event of it being impossible to secure competition, an exigency statement bearing your signature should be submitted with the voucher showing why it was impracticable to secure bids.

THAT when the emergency is due to your own negligence or lack of foresight, an exigency statement is not very convincing.

THAT vouchers covering purchases of lumber must be itemized to show the number and size of the individual pieces, together with unit and unit price in order that the correctness of the total may be checked.

THAT copies of transportation requests should be mailed to this office (MR. R. K. SWARTZ) as rapidly as the requests are exchanged for transportation. Delay in doing this frequently results in deferring payment of the railroad company's vouchers for large amounts. Requests that are spoiled should be marked "VOID" and both copies sent to MR. SWARTS so that you may be released from the charge for them.

EDITORIALLY SPEAKING. By John A. Ferrall.

GROUNDHOG DAY. Every year as February approaches there is a demand for regulation of groundhog day. The fact that there is sure to be sunshine and overcast skies within a few miles of each other makes it desirable that some standard method of choosing the ground hog should be fixed upon--that we should have one particular groundhog whose findings would be considered official.. This matter was brought to the attention of COMMERCE AND FINANCE some years ago and a member of its staff pointed out that the critics had "overlooked an important publication of the Department of Agriculture, Bulletin 447, issued in July, 1909. This valuable work," the writer said, "represents prodigious industry and it seems the irony of fate that it should be lost in the myriad pile of publications of lesser consequence. The contemporary bulletins on 'Uses of Old Suspenders,' and 'How to Sharpen a Lead Pencil,' have had wide circulation. Bul. 447 is an attractively made volume of 169 pages, illustrated with numerous pictures and charts. The Table of Contents includes:

- I. Weather myths among the primitive Aryans.
- II. Groundhogs and the Nordic Race.
- III. Origin of Candlemas Day.
- IV. The Woodchuck in Folklore.
- V. Was the Groundhog known to Homer?
- VI. Religious Aspects of the Groundhog Legend.
- VII. The Legend not Supported by Statistics.
- VIII. Statistics from North America.
- IX. Statistics from South America.
- X. Statistics from Europe.
- XI. Fragmentary statistics from Asia and Africa.
- XII. No Groundhogs in the Pacific islands.
- XIII. The lack of Statistical Data Prior to 1840.
- XIV. Alleged true Predictions Examined.
- XV. Groundhogs in Fiction.
- XVI. Comparative Statistics on Prevalence of the Legend.
- XVII. When May the Groundhog he said to Have Seen His Shadow?
- XVIII. Groundhogs with Defective Vision.
- XIX. Groundhogs as Food. (Sausage)
- XX. Conclusion."

The review goes on to say that there is a chart in the bulletin showing curves based on answers to a questionnaire sent to 10,000 farmers, and another on similar questions addressed to 20,000 farmers' boys. The "Statistics from the Hired Hand," show similar results from letters sent to 2,500 hired men. A diagram (page 59-60) is especially interesting as showing the prevalence of the belief in the groundhog. That the groundhog accurately forecasts on February 2 the length of the remaining winter is believed by 3-1/2 school teachers out of every 1,000; by 17 bricklayers; 421 stockbrokers; 3 lawyers; 578 automobile salesman; and 1/48th of a scientist.

P.S. This Editorial is intended to be humorous. Do not start anything by writing in for the publications mentioned!

IN A LIGHTER VEIN.

CHILDREN CRY FOR THEM! Day by day, in every way, we are learning of the growing use and appreciation of our publications. The latest evidence is in the form of a letter from an Illinois schoolboy who writes that his teacher told her class of the interest and value of the Department's publications and instructed them to write, as part of the class work, for such as they would like. This boy asked for publications on a large range of topics, stating that he wanted to know "all about farming." The close of his letter is a splendid illustration of the frankness and honesty of the younger generation. "I am writing you during school hours," he says, "and I thank you for publishing these books, because by writing to you for them we missed History."

This youngster apparently agrees with Henry Ford's estimate that "history is the bunk!"

IF--WITH A LOW BOW TO MR. KIPLING!

The VALLEY FARMER prints the following from the pen of J. Edward Tufft:

"If you can keep your Ford when those about you are selling theirs and buying Cadilacs; if you can just be tickled all to pieces when notified to pay your license tax; if you can feel a quiet sense of pleasure when driving on a rough and hilly road, and never move a muscle of your visage when underneath you hear a tire explode; if you can plan a pleasant week-end journey and tinker at your car a day or so, then thrill with joy on that eventful morning to find that no skill of yours can make it go; if you can gather up your wife and children, put on your glad rags, and start off for church, then have to wade around the greasy gearings and spoil your best of all your stock of shirts, yet through it all maintain that sweet composure, that gentle calm befitting such events; if you can sound a bugle-note of triumph when steering straight against a picket fence; if you can keep your temper, tongue and balance when on your back beneath the car you pose, and struggling there to fix a balky cogwheel, you drop a monkey-wrench across your nose; if you can smile as gasoline goes higher, and sing a song because your motor faints--your place is not with common erring mortals; your home is over there among the saints!"

THOSE BUMPER CROPS!--The Boston Transcript tells of the young farmers who were boasting about the size of the vegetables they had grown. Finally one of them turned to Uncle Seth.

"What was the biggest thing you raised this year, Uncle Seth?"

"A squash," replied Uncle Seth.

"Well, how big was it?" he was asked.

"We never measured it," he drawled. "But we used the seeds for snowshoes."

PERSONAL MENTION.

Not to be outdone by the gastronomic delicacies, dates and persimmon ice cream, sponsored by speakers at the December meeting of the Botanical Society of Washington, NEIL E. STEVENS was responsible, at the January meeting, for the batch of cranberries which went into the making of the cranberry ice cream and ice that graced the refreshment table. The members showed complete satisfaction with this latest result of the horticultural activities of the Department, leaving but little in the two five-gallon cans!

The mention of the persimmon ice cream served at the December meeting aroused so much interest that our horticultural experts hasten to add, for the benefit of refreshment committees, that the delicacy is made by mixing with the cream the pulped fruit of the Oriental persimmon, much the same way that peach ice cream is made. Incidentally, the wide publicity given this item by the newspapers is likely to help the Department in its efforts to introduce and develop superior varieties of persimmons.

And while we are talking of meetings, CARL S. POMEROY is now serving as president of the well-known Synapsis Club of Riverside, Calif. This club, which is composed of the State and Federal investigators located in and near Riverside, has a program of scientific papers on the first Monday of each month from October to June. At the January meeting, ROY W. NIXON, associate horticulturist of the U.S. Experiment Date Garden at Indio, California, described the date industry of the Iraq and showed slides and motion pictures taken by him on his trip through that region a year ago.

MARGUERITE S. WILCOX will be stationed at Fort Valley, Georgia, from now until the end of April, making histological studies of Phony peach material for DR. HUTCHINS.

H. F. BAIN spent most of January in Chicago in connection with his studies of cranberry diseases. In addition to the regular studies of storage fungi which have been carried on in Chicago for the past four years, he has almost a hundred lots of cranberries which were given different spray treatments during the past summer and which are being examined at this time.

C. L. SHEAR and N. E. STEVENS were at Durham and Chapel Hill, North Carolina, from December 30 to January 1, attending meetings of the History of Science Society and the Agricultural History Society, which met there jointly with the American Historical Association and other societies.

F. S. BEECHER has been transferred from Riverside, California, to Arlington Farm, Virginia, where he will assist in the conduct of tomato disease investigations.

CHARLES F. SWINGLE is junior author of a very important bulletin just contributed to the Department's technical series by this office. It is No. 151, "Vegetative Propagation from the Standpoint of Plant Anatomy." The senior author is J. H. Priestley, professor of botany at the University of Leeds, England. The bulletin is of especial interest in that it was prepared through the cooperation of the Department, the International Educational Board, the National Research Council, the University of Leeds, and the John Innes Horticultural Institution. Dr. SWINGLE'S work on it was done while he was a collaborator, under a National Research Council fellowship in botany.

Sketching his observations as official delegate at the Congrésos Internacionales de Agricultura Tropical y Subtropical y del Cafe at Seville, Spain, FRANK L. GOLL writes of an amusing experience at the Coffee Congress. He found six or seven delegates clamoring for recognition at one and the same time--and in different languages. So he decided to sit there merely "observing." He did this only to find out later that there had been an expression of regret on the part of the delegates that the United States had no representative present!

Recent visitors to the Washington office included M. F. Barrus of Cornell University; L. R. Jones of the University of Wisconsin; D. G. Milbrath of the California Department of Agriculture; and C. R. Orton of the West Virginia Agricultural Experiment Station.

The following papers were contributed to the program of the National Cannery Association at Chicago, January 20-25, by members of our staff: J. S. WALKER, Latest developments in breeding yellow-resistant cabbage; W. J. ZAUMEYER, Bean Diseases and Seed Production; L. L. HARTER, What was the matter with Henderson bush lima seed in 1929?; W. J. ZAUMEYER, Western Seed Growing and the Bean Disease Problem; H. C. DIEHL, Preserving Fruits and Vegetables by Freezing; D. N. SHOEMAKER, Sweet Corn Varieties, Especially the Yellow Ones.

P. M. LOMBARD, who has been in Florida for some weeks in connection with the potato work of the office reports that the material planted at Hastings, Fla. and Houma, La. by the Bureau this year consists of two seed pieces from ten thousand tubers selected from varieties and seedlings from Maine-grown stock last fall. The tubers were cut with a sterilized knife late in October. Duplicate one-pound bags and tags were numbered from 1-10,000. Two seed pieces from each tuber and a tag were placed in each bag. One bag was held in Maine, the other shipped to Arlington Farm, Va. where it was held at a temperature of 40 F. On January 6 part of this stock was shipped to Hastings, Fla. and on January 15 the balance to Houma, La.

THE OFFICE OF HORTICULTURAL CROPS AND DISEASES

S E M I---M O N T H L Y N E W S L E T T E R

The Official Organ of the Office of Horticultural Crops and Diseases,
Bureau of Plant Industry, United States Department of Agriculture

John A. Ferrall, Editor

All material in this NEWS LETTER is confidential, and is not for publication without the prior approval of the Office of Horticultural Crops and Diseases.

Vol. II

Washington, D. C., February 15, 1930

No. 4

RELATION OF LEAF AREA
TO SIZE AND QUALITY OF
APPLES AND PEARS.

Discussing the work conducted by the Washington Experiment Station during the season of 1929 to determine as accurately as possible the leaf surface required to synthesize the organic foods utilized in the development of apples and pears, J. R. MAGNESS and F. L. OVERLEY (of Washington State College of Agriculture) in a paper read before the American Society for Horticultural Sciences at Des Moines, say that it is apparent that there is a fairly definite correlation between number of leaves and size of fruit until at least thirty leaves per apple are available. "The increase in size of fruit with larger leaf area is not, however, directly proportional to the increase in leaf area. In no case was fruit grown with twenty leaves twice as large as that grown with ten. Generally the fruit grown with thirty was somewhat less than double.

"These data would indicate that while size of individual fruits increased with greater leaf surface per fruit, the increase in fruit volume was not proportional to the increase in leaf surface. In other words, increasing the leaf surface per fruit through thinning will decrease the total tonnage produced per tree. The decrease in fruit production per unit of leaf area can be explained in part as due to the greater concentration of carbohydrates in fruit grown with larger leaf area. It is also due in part to a greater storage of synthesized materials in buds and branches when the larger leaf area is available and a greater utilization of these products in wood growth. There is also a possibility that greater accumulation of synthesized materials when greater leaf area is available tends to inhibit synthesis of materials in the leaves.....

"It should be emphasized that these results were secured in irrigated orchards and under conditions of sufficient water supply throughout the season.... Basicly, to secure increased production in

in orchards it would thus appear that we must first of all increase the amount of foliage per tree or per acre. To secure regularity in production there seems to be little question, at least under Western conditions, but that the quantity of fruit produced on the trees must be sufficiently reduced through thinning to allow the development of fruit buds which result only from the accumulation of synthesized materials after the needs of the fruit have been supplied.

"To obtain maximum synthesis of organic foods in the leaves, sufficient moisture throughout the season to allow the leaves to function normally must be available. Thickening of buds, spurs, twigs, and trunk is also dependent upon an excess of synthesized materials being available after the needs of the fruit are supplied."

REPAIRS TO AUTOMOBILES. A number of our workers have recently had repairs made to Government-owned cars without securing the discount that most firms allow under the special arrangements with various automobile manufacturers. The Ford Company, for example, allows a discount of 20% on parts purchased for installation on Government cars either by a Government shop or Ford dealer. If the purchase of such parts from any one dealer totals more than \$83.33 in a single month, the discount is 25%, etc. The Cadillac allows 30%; the Chevrolet, 25%; Commerce Motor Truck, 30%; Denby, 15%; Dodge, 20%; Four Wheel Drive Auto Company, 25%; Garford, 15%; General Motor truck, 20%; International, 25%; Kelly-Springfield, 20%; Packard, 15%; Pierce Arrow, 20%; Reo, 15%; White, 10-15%; etc.

These discounts are available under a variety of conditions and circumstances, of course, and are subject to change without notice. BUT employees purchasing parts should be careful to inquire about the discounts and if none is allowed a statement explaining why should be attached to the voucher.

NEWSPAPER CLIPPINGS CONCERNING DEPARTMENT. "The following memorandum has been received from the Chief of the Press Service," says BPI Memo. 475:

"The Office of Personnel and Business Administration is anxious to get hold of all clippings of articles that call attention to the value of the work done by the Department. If in looking over the clippings that come to you, you find any that will be of interest to that office, will you please send them to me....? If in your reading of newspapers, magazines and trade publications, you find any articles of this sort that you feel would be of interest in this connection, send them along. We can return such clippings if you prefer to have them back."

Such clippings, etc. should, of course, be sent to Dr. Auchter, who will see that they are forwarded promptly to the Press Service, through the Office of the Chief of Bureau.

OVER THE RADIO

(Broadcast by W. R. Beattie, Extension Horticulturist, in connection with the National Broadcasting Company's Noon-Hour Program.)

STORAGE OF DAFFODILS. Results of experiments with the storage of daffodil bulbs conducted by DAVID GRIFFITHS are of interest to home gardeners who have a small supply of these bulbs to store during the summer months. Dr. Griffiths found that the most important factor in the successful storage of these bulbs is that of temperature and that the second important factor is humidity. Under reasonably dry conditions daffodil bulbs do not appear to rot at temperatures varying from 40 to 60 degrees F. Flower development in the bulbs goes on faster at temperatures of from 55 to 62 degrees. Daffodil bulbs do not keep well under refrigeration at temperatures below 50 degrees.

From these experiments it would appear that the proper method of handling daffodil bulbs is to dig them before the tops are thoroughly dead, dry them as quickly as possible, and store them in a cool, well ventilated place. If the natural storage structures are all relatively high temperatures it may be necessary to resort to cold storage at a temperature not lower than 60 degrees for outdoor planting stock and not lower than 50 degrees for forcing stock. The main point is to store the bulbs in a thin layer in small quantities in crates or on shelves in such manner that they will get a free circulation of air at all times. Both extremely low and extremely high temperatures interfere with the development of the flower which should normally go on inside of the bulb during the storage period.

DEMAND FOR BLACK WALNUTS INCREASING. Packers of black walnut kernels are having difficulty in securing a sufficient supply, according to C. A. REED of this office. The demand is mostly for the cracked nuts or the kernels picked from the shells, as it does not pay to ship the whole nuts long distances.

The nuts may be cracked in the home during spare time. The price paid for the kernels is at present sixty-five cents a pound in barrel lots and sixty cents a pound in smaller lots. The price, however, varies considerably according to the quality of the kernels.

The principal markets for black walnut kernels are Baltimore, St. Louis, Chicago and New York. If you have a supply of well cured, bright, black walnuts, it may pay you to crack them, pack the kernels carefully, and send them to market. You should, however, have your market arranged for before you begin the work of cracking. The Department of Agriculture workers will be glad to supply the names of firms who handle black walnut kernels.

EXPRESS BILLS OF LADING
AND CHARGE SLIPS.

"Paragraph 93 of the Fiscal Regulations of the Department in the part dealing with payment by employees of express charges," says P.B.A. Circular No. 140, "directs that the receipts taken show 'articles, weight, rate, scale number, starting point, destination, and value declared if any.' The paragraph is perhaps incomplete in that it does not indicate that the same information, except rate and scale number where it is impracticable to obtain them, should invariably be entered on the bill of lading or charge slip.

"Omissions by employees of the Department of some or all of these items have been repeatedly called to the attention of the Department by the general auditor of the Railway Express Agency, Inc. It should be borne in mind that in the General Accounting Office audit of the express agency's bills the description of article, weight, points between which shipped, and valuation, are rigorously checked against the bills of lading or charge slips, and the accounts cannot be passed unless these items appear on the paper filled out by the Department officer. Delayed settlements, correspondence, and the inconvenience of hunting up information when the transaction is no longer recent, can therefore be avoided by attention to this detail.

"The full cooperation in this matter of all members of the Department having to do with express shipments is requested."

Cooperation with
Area Coordinators,
etc.

"The attention of all officers in the field, of bureaus and activities of the Department," states the Acting Secretary in Memorandum No. 592, "is directed to their duties and responsibilities to the coordinating service as described in Memorandum No. 571, of June 9, 1927. The desire that the spirit as well as the letter of this memorandum be complied with at all times is reiterated and emphasized.

"Membership of the senior representatives of the respective bureaus and activities of the Department in each locality and their principal assistants in their local Federal business associations, which involves no expenditure of funds for travel in excess of ordinary street car fare; acceptance of their election as officers of or appointment as members of committees of a Federal business association; coordination of their work with that of other departments for the benefit of the United States; and compliance with all reasonable requests for assistance and cooperation received from their area coordinators and their Federal business associations are duties that devolve upon all concerned."

GOVERNMENT EXPENDITURES UNDER MEMORANDA OF UNDERSTANDING

For your information--and for future reference: Memoranda of Understanding are designed to outline the basis on which cooperative work is to be conducted and the obligations to be assumed by the cooperating parties. They should not be regarded as finance papers authorizing the expenditure of Government funds. While the cooperating parties assume various obligations under such memoranda, including payment of salaries, travel expenses, labor, rental of land, etc., proper finance papers should be obtained in all cases to authorize those expenditures of Government funds, in accordance with the Fiscal and Administrative Regulations of the United States Department of Agriculture.

Expenditures for rental of land will require a properly executed lease. Performance of travel and payment of travel expenses necessitate specific letters of authority from the Chief of Bureau in advance of the performance of travel. The employment of labor or assistants of any sort must be either by appointment by the Department in the usual way or by employment under Letter of Authorization in accordance with the terms of that letter and the Civil Service regulations. All purchases of supplies or equipment must be made by requisition or under letter of authorization, including specific authority to make such purchases. Receipts must be secured in accordance with the fiscal regulations. Delay in submittal for payment of vouchers frequently causes uncertainty and tends to interrupt effective administration. It is of the greatest importance that such vouchers be submitted promptly.

In order to avoid misunderstandings regarding expenditures under these Memoranda of Understanding, it is urged that all individuals engaged in cooperative work or who may at any time be concerned with transactions involving the expenditure of Government funds, familiarize themselves with the conditions under which such expenditures can be made, so that they will conform to the Fiscal and Administrative Regulations of the Department. Unless the regulations are carefully complied with, the individuals concerned assume a serious risk that the expenditures may not be approved by the Comptroller General, and personal loss result.

Funds appropriated for the work of the Bureau of Plant Industry, even though expended in cooperation with State or other agencies, are administered solely under the authority of the properly designated offices of the Bureau, and should not be confused with funds transferred to the cooperating agency for administration--such as Hatch, Adams, Purnell or Smith-Lever funds.

NOTE--This information is of especial importance to those employees who are engaged at State experiment stations on work being conducted in cooperation with the experiment stations under a memorandum of understanding. It should be filed for reference. Travel accounts should be submitted monthly--and others within 60 days after the incurring of the obligation.

"IT HAS BEEN NECESSARY TO SUSPEND--"

"It has been necessary to suspend \$2.25 from charges totaling \$11.25 on October 6, for Pullman lower berths between Washington, D. C. and Albany, Georgia, since you have used two transportation requests-- one from Washington to Atlanta, \$7.50; the other from Atlanta to Albany, \$3.75. If you had purchased thorough accommodation from Washington to Albany (as required by Travel Regulations, Par. 13-D) the total cost would have been \$9.00 only."

"February 5, dinner for assistant, \$1.10 must be suspended, no matter how much justified it seems to have been, since your letter of authorization does not authorize such an expense. BE SURE TO FAMILIARIZE YOURSELF WITH THE LIMITATIONS OF YOUR LETTER OF AUTHORIZATION. It can usually be amended if it is not broad enough--and you can give a convincing reason for the amendment."

"February 12, 10c from charge of 30c on an 18-word telegram sent by NIGHT LETTER from Casa Grande, Arizona, to San Diego, California. The regular night telegraph rate to the Government is only 20c. You are advised that telegrams should not be sent as day or night letters unless the number of words is around 40, as the regular Government rate is cheaper on short telegrams."

"February 7, 8, 9 and 10, 5c each from charges of 30c for hotel porter fees, handling three pieces of baggage. The maximum allowable in each instance is 25c. (Par. 99-C, Travel Regulations)."

NOTE:--- As a matter of keeping records straight, it is requested that in future all salary assignment slips (the 3-1/4 x 7-3/4 white slips---No. 8-3115) be sent through Mr. R. K. Swartz, Horticultural Crops and Diseases, Bureau of Plant Industry, Washington, D. C.

COMPENSATION FOR INJURY. Please remember that in order to be eligible for benefits under the Employees Liability (Compensation) Act, you should report within forty-eight hours IN WRITING any injury or illness occasioned in the line of duty--such report to be made to your immediate official superior.

INVENTORY. When ordering property of an inventorial nature a complete description must be given so that the item may be properly entered on our inventory records.

EDITORIALLY SPEAKING

By John A. Ferrall

THEY NEED REST, TOO! We are accustomed to thinking of this as a fast age and rather boasting of the pace at which we travel, and the ability with which we seem able to dispense with sleep. There is even a modernized version of the incident of Mary and her little lamb. It reads:

Mary had a little lamb,
Given her to keep.
It followed her around until,
It died from loss of sleep!

But I have always thought of this lack of rest as peculiarly the problem of human beings. It seems, however, that the matter has a horticultural angle as well. Trees and plants, too, need their rest.

"Severe winters in the North usually mean short crops," says a recent Clip Sheet issued by the Department, "but with peaches in Georgia and apples southward from Virginia, the rule works just the other way. This is because temperate-zone fruit trees require a definite amount of cold weather during which certain changes are carried on which prepare them for growth in the spring. This period of 'rest', which is so definitely required for many trees and plants, is really therefore a period of important changes in the trees."

Dr. M. B. Waite, of the Office of Horticultural Crops and Diseases, observed years ago that our northern fruits, such as the peach, when cultivated too far south in Georgia frequently exhibit symptoms of delayed growth. This is undoubtedly due to the fact that they have not had sufficient sleep--have lacked an adequate resting period.

Dr. Lee M. Hutchins, of this office, has "recently observed the same phenomenon and points out that as a rule, in about one year in five, the mild winters of Georgia do not give peach trees the required amount of resting period, and the result is what peach growers call 'prolonged dormancy.' When this happens, peach trees in the lower portion of the State fail to bloom at their regular time. Finally they bloom, from a week to several weeks late.

"This disturbance may interfere with the setting of the fruit, and the ripening of the fruit may also be thrown off schedule and come in with the crop in other parts of the State farther north."

The analogy with human beings is very clearly shown by this last reaction for all of us know that late hours and lack of rest show as one of their first results a tendency to make the person affected come in late, just as the fruit crop does!

FOREIGN TRAVEL? One of the drawbacks (or is it?) of scientific work is that it usually makes necessary frequent absences from home. Anyway, apropos of this, a story is being circulated to the effect that one such worker happened to have the same name and initials as a well-known clergyman of his town. The clergyman died last summer and just about that time the investigator had to make a field trip to California. He reached the vicinity of Fresno, California, in time to encounter one of the intensely hot spells. He telegraphed his wife the news of his safe arrival, but, unfortunately, the telegram was delivered to the widow of the clergyman. Imagine the surprise of that good woman when she opened the telegram, supposedly from her husband, and read: ARRIVED SAFELY. HEAT TERRIFIC.

AUTOMOBILE TRAVEL. A reader, who pretends to have enjoyed the Ford auto rhyme in the February 1 issue of the NEWS LETTER, contributes the following from the NEW YORK SUN:

When all the parts are new, lad,
 And all the spark plugs clean;
 And every axle true, lad,
 And every mile serene.
 Then give your tank it's fill, lad,
 And round the world away,
 Young blood must have its thrill, lad,
 And every car its day.

When all the parts are worn, lad,
 And all the gaskets leak;
 And every cushion's torn, lad;
 And every battery weak.
 Then let your motor cool, lad,
 The used-car shops among;
 Maybe you'll find some fool, lad,
 Who's waiting to be stung!

THE OLD OAKEN BUCKET AGAIN? The time-honored jest that the pump is the best cow the milkman owns seems to be spreading out to cover new territory. The AMERICAN LEGION MONTHLY reports a conversation between two oranges awaiting their turn in a fruit juice establishment.

"Don't you wish you was as big as me?" demanded the first.

"Aw, gwan, you ain't so big," scorned the second orange. "I bet you won't make twelve gallons more orangeade than I will."

HORTICULTURAL.

"I have a family tree," he said,
 To aid him in his suit.
 "Perhaps you have," the maid replied,
 "But I do not like its fruit!"

PERSONAL MENTION

DR. AUCHTER on February 13-14, attended the meetings of the West Virginia State Horticultural Society at Martinsburg, West Virginia, delivering an informal talk on "Factors Influencing Color and Quality of Fruit."

J. R. MAGNESS also attended the Martinsburg meeting and delivered an address on "Lessons to be Learned from the Northwest Fruit Industry."

NEIL E. STEVENS visited points in New York, Massachusetts and New Jersey in connection with his investigations on cranberry diseases and to confer with officials of the New York State Department of Agriculture concerning false blossom.

FREEMAN WEISS spent several days recently on Long Island, inspecting greenhouse plantings of Callas and sweet peas for root diseases; and the relation of disease to soil reaction.

R. B. WILCOX attended the meeting of the American Cranberry Growers' Association at Camden, New Jersey, January 25, and gave a report on the year's work on cranberry diseases, with special reference to his own experiments on false blossom. WILCOX has demonstrated that the disease may be transmitted by the blunt-nosed leaf-hopper as late in the season as the hopper is found. The American Cranberry Growers' Association, incidentally, is really an association of New Jersey cranberry growers. It was the first organized of the Cranberry Growers' Associations and took the name of the American Cranberry Growers' Association, which it still retains.

Among recent visitors to the office was Dr. F. A. Wolf, formerly connected with the Citrus Disease Investigations at the Orlando laboratory, and now professor of botany at Duke University. With him was a graduate student, Mr. Brecher, whose home is in Dresden, Germany, who is staying a year in Durham, studying tobacco problems.

C. A. MAGOON on January 21, gave a paper at the Annual Meeting of the National Preservers' Association at Chicago, Illinois. His subject was "Studies on Spoilage in Frozen Pack Fruits."

Speaking of "frozen pack," H. C. DIEHL, J. R. MAGNESS, C. R. GROSS, and V. B. BONNEY (the first two members of our staff, of course) describe in Technical Bulletin No. 148, U. S. Department of Agriculture, just issued, the frozen pack method of preserving berries in the Pacific Northwest. The method used consists essentially of placing the fruit in barrels or other containers with or without sugar and freezing and storing the pack at relatively low temperatures. The bulletin is conspicuous for its amazingly comprehensive "summary" of the work.

FRED L. HUSMANN, Napa, California, writes that the making of grape cuttings for distribution and nursery purposes, has been completed in the Department of Agriculture Experiment Vineyards at Chico, Colfax, Elk Grove, and Oakville, California; and the pruning has about been accomplished in these vineyards. The pruning and replantings are completed in the cooperative grape plots at Cloverdale, Healdsburg, and Rincon Valley, California.

ELMER SNYDER, Fresno, California, states that the making of grape cuttings for distribution and nursery purposes and the pruning of vines has been completed in the Department of Agriculture Experiment Vineyard at Fresno, and in the cooperative grape plot at Shafter, California.

GEO. C. HUSMANN, in charge of the Department's grape work, who, the latter part of December, 1929, returned from a three months' official trip to the Southwest and the Pacific Coast, outlining grape researches, reports that all the time he can get away from other duties since his return is occupied in responding to requests for grape propagating material of the newer and better Euvitis varieties and of phylloxera resistant grape stocks that are not procurable from nurseries in this country, and in giving general information on grape pruning, training, and culture, and the better varieties suited to various parts of the country and for the various purposes for which grapes are grown.

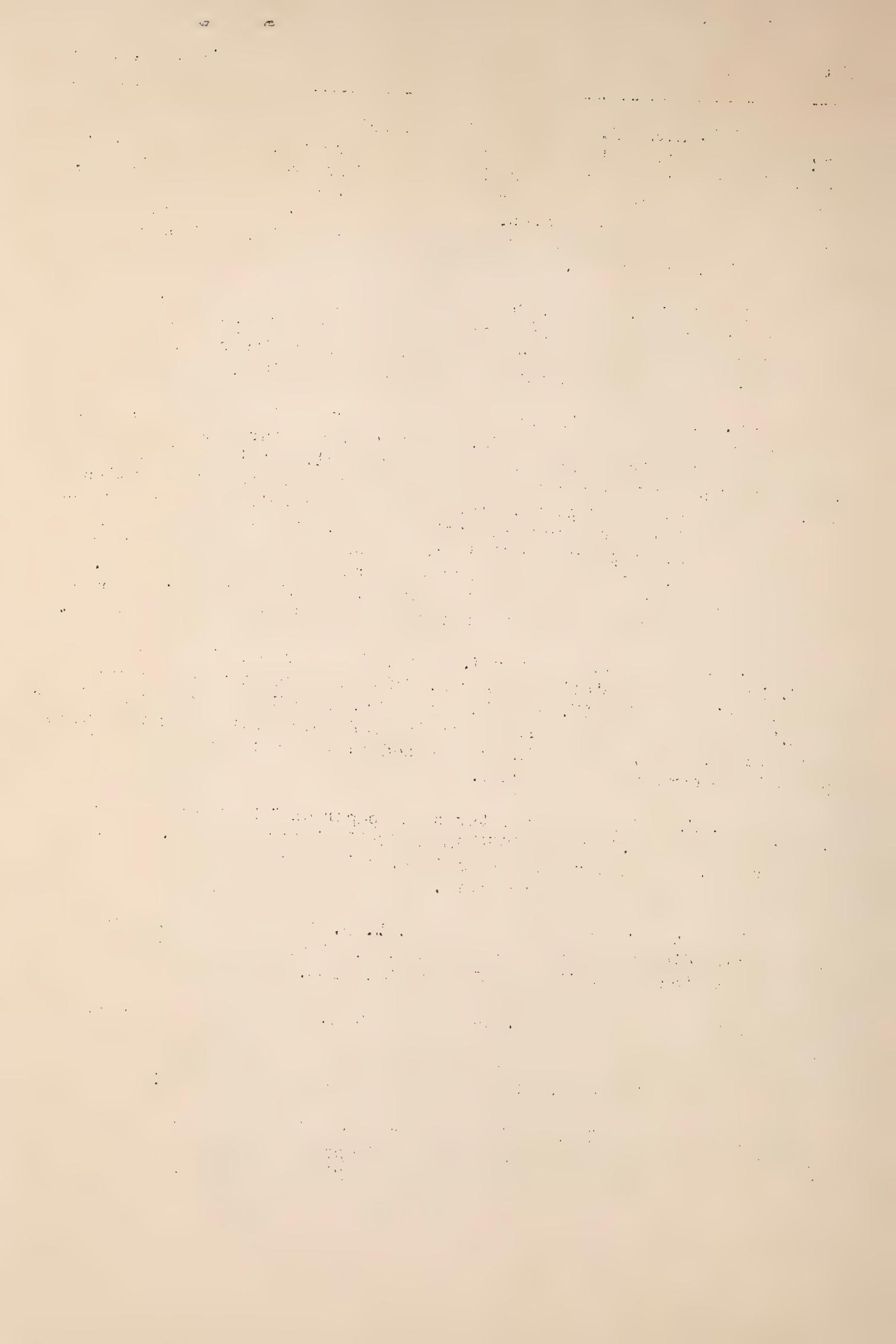
H. P. GOULD (with Oliver J. Grace, formerly superintendent of the U. S. Dryland Field Station at Akron, Ohio) has just issued a revision of Farmers' Bulletin 727, "Growing Fruit for Home Use in the Great Plains Area." Fruit growing in this region is confined mainly to home orchards and gardens, and the bulletin is intended as an aid to the rancher in producing a home supply of fruit.

GEO. M. DARROW has an interesting paper on "Thornless Sports of the Young Dewberry," in the JOURNAL OF HEREDITY for December, 1929, just issued. The paper carries an interesting pen-and-ink sketch of the original of the thornless sport.

The many friends of the late Dr. W. A. Orton will be interested in the splendid obituary notice which W. W. Gilbert of this office has contributed to SCIENCE for January 24, 1930, pages 89-91.

Technical bulletin No. 147 of the U. S. Department of Agriculture series, discusses the habits and economic importance of alligators-- a fact perhaps worth noting in a horticultural publication, in view of the alligator's attempt to fasten his name to the avocado!

MISS MAGDALINE R. NEWMAN, librarian of the office, calls attention to the fact that the Horticultural Crops and Diseases library is now located in Room 3 (basement) of the Bieber Building.



THE OFFICE OF HORTICULTURAL CROPS AND DISEASES

SEMI-MONTHLY NEWS LETTER

The Official Organ of the Office of Horticultural Crops and Diseases,
Bureau of Plant Industry, United States Department of Agriculture.

John A. Ferrall, Editor

All material contained in this NEWS LETTER is confidential and is not
for publication without the prior approval of the Office of Horticultural
Crops and Diseases.

Vol. II

Washington, D.C., March 1, 1930

No. 5

AN OUTLINE OF ACTIVITIES. The popularity of "outlines of history," "outlines of science," and so on, has lead to an inquiry: Why not an outline showing the scope and activities of the Office of Horticultural Crops and Diseases. Well, why not? The wording of our appropriation act is: "Horticultural Crops and Diseases: For investigation and control of diseases, for improvement of methods of culture, propagation, breeding, selection and related activities concerned with the production of fruits, nuts, vegetables, ornamentals and related plants, for investigation of methods of harvesting, packing, shipping, storing, and utilizing these products, and for studies of the physiological and related changes of such products during the processes of marketing and while in commercial storage." The office personnel averages something less than 380, about evenly divided between Washington, D. C. and the field.

Production studies relate to methods of growing, including planting, maintenance of soil fertility, cultural practices, and other operations; physiological aspects of growth, improvement of varieties by breeding and selection, including the development of fruit and vegetable varieties, especially vegetables; handling, storage and transportation investigations have to do with methods, practices, devices and equipment whereby perishable products may be placed in the hands of the consumer in the best possible condition with the least possible losses to grower and shipper during storage and transit. The utilization studies consider the preparation of fruit and vegetable products and by-products, fruit juices, methods of preparation, canning, causes of deterioration of canned goods, varieties suitable for utilization purposes, and the cause of influences affecting the quality of utilization products.

The work with ornamental plants includes the improvement of varieties by breeding and selection; methods of culture; the use of plant material in landscape gardening; landscape design, especially in the arrangement and ornamentation of farmsteads, etc. With special reference to bulbs, the investigations have to do with cultural methods, the handling and treating of the bulbs, and the breeding of new forms.

The fruit disease investigations relate mainly to problems of research, including investigations of the nature and behavior of the fungi and bacteria causing fruit diseases, studies of virus diseases and the non-parasitic or physiological diseases of fruits and fruit trees. A considerable part of this work is concerned with the devising of methods of control of the various diseases--spraying, disinfection, modification of cultural methods, etc. These investigations include the study of the fruit rots and decays, the cause of deterioration of fruits in transit, in storage and on the market, and the development of methods of prevention or reduction of such losses.

A comprehensive study of the diseases of vegetables is carried on to determine the cause, the conditions of temperature and humidity, etc. under which the diseases develop, the localities where they are most serious, the losses incurred, the methods of disease transmission from plant to plant and from field to field, the means of over-wintering, the host range of the disease and the development of control measures that will be effective, practical and suited to the different conditions under which the affected crops are grown. Particular attention is given to bacterial diseases. In fact, much of the pioneer work on bacterial diseases was done in the Bureau, including the discovery of the bacteria causing wilt to cucumbers, and related plants; the brown rot of potatoes, tomatoes, etc.; the Grand Rapids disease of tomatoes; Stewart's disease of sweet corn; crown gall and various bacterial diseases of beans, cauliflower, lettuce, etc.; and extended work on other bacterial diseases, such as the black rot of cruciferous plants.

The plant physiological studies deal with the carbohydrate metabolism of vegetables during growth and in storage to determine the transformations and gain or loss of food materials under various conditions; the nitrogen metabolism and protein synthesis of plants, to obtain a background upon which a rational investigation of many diseases and disturbances of the nitrogen metabolism of crop plants may be based; the systematic and complete investigation of various plants in order to determine the nature of their principal organic constituents, the nature of these compounds, the formation and progressive changes in the living plant and, if possible, the means of their synthetic production; the effect of low temperature on plants to determine the cause of injury or resistance to frost; the cell sap and relation of changes therein to certain plant diseases and physiological behavior; the absorption of salts by plants, to determine the physiological basis for the better nutrition of crops in the field, etc.

USE FRESH "Slacking lime is an exacting and messy job,"
 HYDRATED LIME declares J. H. CRENSHAW, in an article furnished for
 FOR BORDEAUX. use in connection with our radio broadcasts, "even
 when the grower is quite well equipped for the oper-
 ation. The manufacturer with skilled workmen and the best of equip-
 ment can merely do a more uniform and more economical job of preparing
 the hydrated lime.

"The fly in the ointment, however, is the fact that hydrated
 lime when exposed to air changes into a different compound (carbonate
 of lime), which is useless for spray mixing. If this compound is used
 in making Bordeaux it is apt to result in a spray which is injurious to
 the plant and fruit sprayed. Manufacturers have partly overcome this
 objection by delivering hydrated lime in sealed paper bags. Even with
 this precaution, however, samples kept in storage for some time have
 quite often been found partly deteriorated. When buying hydrated lime,
 only one season's supply should be purchased at a time, and this should
 have been freshly manufactured and should be stored in a dry place out
 of air circulation.

"When the bags are opened, the contents should be of a fine,
 floury consistency, free from moisture and absolutely free from lumps,
 even small ones. The active ingredient entering into disinfecting
 Bordeaux spray is copper sulphate or bluestone. If this were sprayed
 on the plant alone, however, it would cause serious injury, besides
 being washed off by the first rain. The bluestone is therefore com-
 bined with the hydrated lime to form a compound that does not injure
 the plant, and which is acted on by the agencies of nature to slowly
 liberate chemicals which are toxic to harmful organisms.

"If hydrated lime has been changed by the air, it will not com-
 bine with the copper sulphate, with the result that some of the toxic
 copper compound is uncombined and therefore a spray that is more of
 less toxic to the plant is produced."

THE PERSONAL "Before you fertilize, prune and irrigate your
 ELEMENT IN orchard," says a booklet by E. E. Knight, "fertilize
 HORTICULTURE. your mind with study, prune your mind of its prejudices
 and irrigate it with love and faith. Grow with your
 trees. Give and you shall receive. Take at least a part of your
 profits in the pleasure of seeing your trees grow strong, healthy and
 beautiful as God intended them to be. No man ever made a success
 unless he loved his work and had faith in his business. The quality
 of the fruit you grow depends more on you than on your trees. It
 is the man who grows the best fruit that stays longest in the business.
 He who grows the inferior fruit is the first to drop out. It is the
 process of elimination. There is no business in which all are successful."

CRANBERRY Because of the interest aroused by the brief comment
FALSE under "Personal Mention," in the NEWS LETTER of February
BLOSSOM. 15, concerning R. B. Wilcox's demonstration that cranberry
 false blossom may be transmitted late in the season by
the blunt-nosed leaf-hopper, we asked him to give us a short note on
his cranberry inoculation experiments. He writes:

"With certain virus diseases of woody plants, for example the raspberry, natural infection of healthy bushes usually occurs during a short period in the spring and early summer, when the host plants are making active vegetative growth. It has not been known whether the same rule would apply to the false blossom disease of the cranberry. The cranberry plant makes two distinct types of vegetative growth; the development of "uprights" (which will fruit the following year) takes place early in the season, for the most part before the end of June; the extension of "runners," on the other hand, may continue all season, even after hard frosts in the fall. The blunt-nosed leaf hoppers, which have been convicted of transmitting false blossom, appear in the New Jersey bogs late in May, they are most abundant during June and July, and begin to diminish in numbers early in August. Insect transfers made at Toms River, N. J., in 1928, on which results were taken a year later, indicated that the plants were seriously receptive to infection as late as August 14th (the latest date tested), long after the growth of uprights was completed, and as late in the season as the insects vectors occurred in large numbers on the bogs. Higher percentages of infection were secured, however, on plats inoculated earlier in the season. The work will probably be repeated and extended during 1930, but it will be nearly two years from now before we have any further results."

POTATO "Rainy weather in Houma, Louisiana," writes P. M. Lombard,
WORK. associate horticulturist, "delayed putting in the Department's
 experimental work until the first of February. The work was
completed on February 3, with the exception of about an hour's work
which Prof. Miller of the Baton Rouge Experiment Station will attend
to when he plans his experimental work. Thirty cars of certified
seed came into the Terrebonne County up to February 3, and fully
eighty-five per cent of this stock was not planted on this date.
Germination notes were taken on our experimental plots in Hastings,
February 11 and 12. About one-third of the plants had germinated.
Outside of the Federal Point section potatoes are not very far advanced
in the Hastings area. A large per cent of the acreage has not germinated.
A shipment of seedling plants was received February 14, from Washington,
but because of heavy rains were not transplanted until the week of
February 17. The writer will take notes on the potato crop as far
south as Homestead, Florida, the latter part of February."

FRESH FRUIT EXPORTS SHOW GAINS RECENTLY. "The growth on the exports of fresh fruits has been very pronounced in recent years," says **COMMERCE REPORTS** for February 17, 1930," and now includes a great number of varieties. Apples and oranges lead in importance, exports of apples for 1929 aggregating \$33,138,000, compared with \$26,663,000 in 1928, and oranges amounting to \$18,746,000 compared with \$13,912,000 a year ago. The United Kingdom was our principal market for apples and Canada the principal market for oranges. The value of all exports of fresh fruit totaled \$68,661,000--an increase of \$12,645,000 over 1928.

"Exports of canned fruit show little change, totaling \$33,046,000 compared with \$32,026,000 for 1928. Peaches and pears continue to be the principal canned fruits exported. Dried-fruit shipments declined somewhat during the past year, amounting to \$34,281,000--a decrease of 13.5 per cent, compared with 1928. Prunes, which constituted 43.3 per cent of the value of dried-fruit exports, declined by 26.3 per cent in quantity and 8.5 per cent in value; raisins, which comprised 24.5 per cent of the total declined by 33.9 per cent in quantity and 33.8 per cent in value. This decrease occurred largely in the shipments to the leading European markets."

EXPORTS OF FRESH AND CANNED VEGETABLES SHOW DECIDED GAIN. "The 1929 export trade in fresh vegetables aggregates \$11,996,000 and that of canned vegetables, \$14,331,000--increases of 17.2 per cent and 15.2 per cent, respectively. Canned asparagus continues to be the leading canned vegetable exported and shows the greatest gain, totaling 22,834,000 pounds with a value of \$3,545,000--increases of 28.9 per cent in quantity and 31.1 per cent in value over 1928. The trade in canned soups shows a steady growth, the 1929 exports amounting to 22,751,000 pounds with a value of \$2,723,000 compared with 28,279,000 pounds valued at \$2,603,000 in 1928."

DIRECTORY OF FIELD ACTIVITIES. The new edition of the Directory of Field Activities of the Bureau of Plant Industry is being distributed. This is Miscellaneous Publication No. 64. We shall be glad to have you call our attention to any errors or omissions in this publication, which need immediate correction in the **NEWS LETTER**, or which could be filed for use when the next edition is prepared.

LETTERHEADS. As early as it is practicable to do so, it is desired to have all the correspondence of the office written on letterheads bearing the present name of the office, "Horticultural Crops and Diseases." Please inform Mr. Swartz as to your letterhead requirements for the next six months so that he may forward you a supply of new letterheads to replace old forms now in your possession.

THAT REMINDS ME--

THAT you are not authorized to repair property which is not Government owned unless there is an existing written agreement on file in this office specifying that the repairs are to be made at the expense of the Government.

THAT you are not authorized to make improvements on property which is not Government owned unless the agreement under which the property is held specifies that such improvements are to be made at the expense of the Government.

THAT when submitting vouchers covering materials for repairs to or improvements of non-Government-owned property, reference to the agreement which authorizes the expense should be made in an accompanying statement.

THAT field property must not be destroyed without first having a Board of Survey appointed to pass on the condition of the items and recommend their disposal.

THAT inventorable articles charged to you and lost or stolen must be accounted for on a Certificate of Loss setting forth the circumstances of the loss and the effort made to recover the property. Such report forms may be secured from Mr. Swartz.

THAT this is the season of the year when men who are authorized to travel and incur expenses must watch their letters of authorization carefully to see that they will not be overdrawn. If an increase is likely to be needed, see that the request for it is sent to Washington in time to allow for preparation of amendment in the usual manner.

GASOLINE TAX EXEMPTION.--P. B. A. Circular No. 143 gives the following list of States which have arranged for exemption from State tax at time of sale on gasoline procured for the use of the Federal Government: Arizona, California, Florida, Idaho, Illinois, Iowa, Kansas, La., Michigan, Minnesota, Missouri, Montana (State Board of Equalization, Helena), Nebraska, New Jersey, New York, New Mexico, Oklahoma, Oregon, Pennsylvania, Rhode Island, Utah, Vermont, Washington, W.Va. and Wis.

The exemptions are ordinarily granted through certificate forms procurable from the State Auditor or other State officer, and the exemption is supposed to be granted not only by producers or distributors but BY RETAILERS who have already paid a State tax as part of the purchase price. Employees should secure these forms (sometimes distributed through dealers) and use their identification cards to show that they are acting for the Federal government. Receipts for all tax-free gas should bear the statement "State tax not included."

EDITORIALLY SPEAKING. John A. Ferrall.

CREAM OF WIT-- The "In a Lighter Vein" page is intended to serve a
FOOD, NOT real need--to provide material for those employees who
CONFECTION! are called on to deliver talks before growers' organiz-
ations and groups and need something to lighten up the
addresses, to get the audience in good humor and in a receptive mood. If
the page provides entertainment well, fine, but it should be taken
seriously! It is to be regretted that we cannot supply ready-made
talks that would further lighten the burden of these workers, but this
seems impracticable. Years ago Prof. A. Parker Nevin of Princeton
made an attempt to provide a speech that could be used on any occasion
and under any title; to sound effective without saying anything.

"Mr. Chairman, Ladies and Gentlemen," it said, "It is indeed a great
and undeserved privilege to address such an audience as I see before me.
At no time in the history of human civilization have greater problems
confronted and challenged the ingenuity of man's intellect. Let us look
around us. What do we see? What forces are at work? Whither are we
drifting? Under what mist of clouds does the future stand obscured? My
friends, the crucial test demands the sheer and forceful application of
those immutable laws which down the corridor of Time have always guided
man, groping for some beacon light for his hopes and aspirations. Without
these great vital principles we are but puppets responding to whim and
fancy. We must readdress ourselves to these questions which press for
answer and solution. The issue cannot be avoided. It is upon you, and
you--and even upon me that the yoke of responsibility falls. What, then,
is our duty? Shall we continue to drift? No! With all the emphasis of
my being I hurl back the answer--NO! Drifting must stop. We must press
onward and upward toward the ultimate goal to which all aspire.

"But I cannot conclude my remarks without touching briefly upon a
subject which I know is steeped in your very consciousness,--that spirit
which gleams from the eyes of the newborn babe, that animates the toiling
masses, that sways the hosts of humanity past and present. Without this
energizing principle all commerce, trade and industry are hushed and will
perish from the earth, just as surely as the crimson sunset follows after
the golden sunshine. Mark you, I do not seek to unduly alarm you, but
I would indeed be recreant to a high resolve which I made as a youth if
I did not at this time and in this place and with the full realizing
sense of responsibility which I assume, publically declare and affirm
my dedication to the eternal principles and precepts of simple, ordinary,
commonplace JUSTICE!"

Even this, of course, would be lightened up by a well-told story,
a story such as we try to place before you. A reader has asked whether
the "In a Lighter Vein" material is original. Very seldom. For the most
part it is what is known as "shear-wit", clipped from whatever source
that comes within our reach. This, of course, is a concession to those
readers who think the jokes should be cut out!

In a Lighter Vein.

SPEAKING OF AUTOMOBILE INSURANCE! It is all right to emphasize the importance of automobile liability insurance, but the fact is that existing policies are not broad enough. Consider this: A man was driving his automobile along a country road and, turning a curve rather unexpectedly, came upon a man with a gun on his shoulder and a dog beside him. Before the car could be stopped it hit the dog, killing him. The driver had once been stung by paying ten dollars for killing a dog only to find out later that it did not belong to the man accepting the ten. Jumping from his car, then, his first question was as to whether the dog belonged to the man with the gun. It did. Was it a valuable dog? No, to tell the truth he was rather worthless. And would five dollars square up things? It would. Handing over the five the traveler got back into his car. "I'm sorry I broke up your hunting trip," he said as he started to drive off. "I wasn't going hunting," said the man with the gun. "Then what was the idea of the dog and the gun?" asked the automobile driver. "Oh," said the man, calmly, "I was taking the dog into the woods to shoot him."

Come into the garden, Maude,
The dawn begins to break.
Come into the garden, Maude--
And bring your hoe and rake!

SLIGHTLY EXAGGERATED! A certain man had fallen into the habit of exaggerating things. "I just can't help it," he said to a friend who reproached him. "Whenever I hear some one tell a story, I just have to go it one better."

"Well," replied the friend, "I'm taking you to a rather high-class party tonight and you must watch your step. I'll tell you what I'll do--I'll keep near you and if I hear you starting a big story, I'll cough and you can slow up."

Things went along beautifully until a member of the party happened to describe a new barn that had just been erected by a neighbor. It was a very large barn, it appeared.

"Speaking of large barns," said the victim of the exaggeration habit, "my uncle had one of the largest barns I ever saw. It was one thousand feet long--" Just then he heard his friend cough significantly, and hesitated, "--and just two feet wide," he finished.

THE EPITAPH. Some years ago a London paper offered a prize for the best epitaph on the prehistoric owner of the ape-man skull found at Bechuanaland. The prize went to this effort:

Here lies a man who was an ape.
Nature, grown weary of his shape,
Conceived and carried out the plan
By which the ape is now a man.

PERSONAL MENTION.

DR. AUCHTER and DR. MAGNESS left Washington February 16 for a trip to Illinois, the Gulf States and Texas, to inspect work at field stations and to confer with workers concerning the progress of experiments. At Carbondale, Illinois, they inspected pruning systems and winter injury to peaches, and then proceeded to Brownwood, Texas, where they investigated conditions in regard to the establishment of a pecan experiment station, looked over the date variety tests at Weslaco, Texas, and made a brief study of the Citrus problem in the Rio Grande Valley. After conferring with office representatives at Shreveport and Albany (Georgia), they will return to Washington about March 4.

FRED L. HUSMANN, Napa, California, reports that the pruning of vines in the Department's experiment vineyard at Oakville, California, was finished on February 7, and replantings of vines completed on February 7.

ELMER SNYDER, Fresno, California, under date of February 11, writes that plantings and replantings have been accomplished in the Department's experiment vineyard at Fresno, California, and that checks of phylloxera resistant grape stocks for nematode resistant tests have been planted near the laboratory presided over by W. S. BALLARD, near Fresno, Calif.

A number of office investigators, including J. H. and W. R. BEATTIE, VICTOR R. BOSWELL, L. L. HARTER, ROSS C. THOMPSON, D. N. SHOEMAKER and W. J. ZAUMER, attended the Canning Crops School at College Park, Md. February 18, 19 and 20, keeping in touch with the latest developments in canning crop production.

LAURISTON C. MARSHALL visited Washington briefly the middle of February for consultation in connection with the assembling and installation of special propagating equipment at the Beltsville, Maryland, greenhouse for handling date palm offshoots. Later in the month he visited New York City and points in the vicinity, consulting with representatives of the Corning Glass Works and the Cooper-Hewitt Electric Company relative to special equipment for use in this work.

E. V. SHEAR is at Hood River, Oregon, and vicinity, investigating perennial apple canker and other apple diseases.

A. F. KIDDER, director of the experiment station at Caneto, Peru, was a recent office visitor. Mr. Kidder was interested in securing a man experienced in the breeding of cotton for wilt resistance, to supervise the work being inaugurated along this line in the vicinity of Lima, Peru.

The daily papers announce that WALTER T. SWINGLE has been made a member of the Committee of Awards for the gold medal and five thousand dollars to be given annually by Senator Arthur Capper for distinguished service to American agriculture. The first prize is to be presented in December, 1930. Any living American who has rendered distinguished service to the agriculture of the United States is eligible for consideration, and no time limitation is imposed as to when the service rendered to agriculture was performed. "My object," says Senator Capper, "is to provide a concrete expression of gratitude to some of the people who make contributions of national importance to American agriculture and to assist in stimulating public appreciation of unusually fine service to our basic industry." Communications regarding the award, etc. should be addressed to F. B. Nichols, Capper Building, Topeka, Kansas, who is secretary to the Committee of Awards.

C. S. Pomeroy and R. E. Caryl recently visited the U. S. Cotton Field Station at Shafter, California, to plant trees of peach and apricot bud variations that were propagated last fall. This is a continuation of an experimental cooperation at Shafter started in January, 1927, when the first plantings of such variations were made. Some of these 1927 trees bore fruit last fall.

Incidentally, POMEROY reports that W. F. WIGHT interested the members of the Synapsis Club of Riverside at the February meeting by his discussion of the origin and distribution of the peach in relation to breeding, to which he added an exhibit of dried and canned specimens of several promising seedlings and hybrids.

R. B. WILCOX attended the meeting of the Blueberry Cooperative Sales Company at Pemberton, New Jersey, on February 28, and delivered an address on "Tests of the Keeping Quality of New Jersey Blueberries, 1929."

R. C. WRIGHT spent the latter part of February in Chicago and vicinity inspecting on arrival cars of potatoes loaded under different methods for protection against freezing.

A CORRECTION.--"The report of the Des Moines meeting of the Potato Association of America," writes W. STUART, senior horticulturist, "contains a statement regarding the exhibit which the writer has since discovered to be in error. In this report the Department was credited with an exhibit of 65 plates of seedling potatoes and the Michigan Agricultural Experiment Station with 6.

"The facts in the case were that 6 of the 65 plates in the Department exhibit consisted of Michigan originated seedlings which had been grown with the Department's seedling collection of 1929. Michigan should, therefore, have been credited with 12 plates of seedlings and the Department with 59."

THE OFFICE OF HORTICULTURAL CROPS AND DISEASES

S E M I---M O N T H L Y N E W S L E T T E R

The Official Organ of the Office of Horticultural Crops and Diseases,
Bureau of Plant Industry, United States Department of Agriculture.

John A. Ferrall, Editor

All material contained in this NEWS LETTER is confidential and is not
for publication without the prior approval of the Office of Horticultural
Crops and Diseases

Vol. II

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No. 6

HORTICULTURAL OBSERVATIONS IN MEXICO. "Some observations made in the course of a visit to the Hacienda de Redo y Cia, located at Eldorado, Sinaloa, Mexico, may be of interest to readers of the NEWS LETTER," writes A. D. SHAMEL. "This plantation lies just above the tropic of Cancer and south of Denver, Colorado, and is about 500 miles south and east of Nogales, Mexico. It consists of about 100,000 acres of land that may be roughly described as a coastal plain sloping gently and evenly to the sea. The elevation at the sugar factory is 150 feet above sea level. The rich soil appears to be alluvial in character, the climate is almost tropical and the average annual rainfall is about 15 inches. The vegetation is largely similar to that of our semi-arid Southwest, the dominant trees appearing to be the mesquite, giant cactus, palo verde and palo blanco.

"About 15,000 acres are devoted to sugar-cane culture and the purpose of my visit was to advise with the growers of this crop as to bud selection and methods of propagation. I found these problems to be quite similar to those studied during early visits to Hawaii. However, not the least interesting of the opportunities for study were the plantings of tropical and semi-tropical fruit trees. I was told that there are 1,250 acres planted to such trees on the hacienda. A large sign on the main road leading to the plantation headquarters, roughly translated, says "Traveler help yourself freely to the fruits of these trees, but please spare the trees." The fruits are picked freely by the 12,000 people on the plantation and one can easily understand from this and other similar generous actions of the owners why there are no labor troubles there.

"The fruit trees are mainly obtained from the leading nurseries of Mexico, the United States and Europe, and consist largely of carefully selected varieties of the avocado, mango, anona, guava, banana, litchi, papaya and many citrus fruits.

"The sugar cane fields are bordered with guava trees, some bearing fruits of extraordinary size. The giant bamboo is also grown extensively alongside some of the roadways and is used for many purposes on the plantation.

"My visit (the latter part of January), was at the time of the blooming of the avocado, mango and citrus trees. The grapefruit and Navel orange trees were particularly interesting to me as I had the privilege of sampling stored fruits from these trees. The Marsh grapefruit and the Washington Navel oranges I was told, ripen in September and October. The fruits of these varieties that I ate were similar in quality to those grown in Arizona. They were very different from those of other tropical districts that I have tasted in that they were quite acid, resembling in taste those of our Southwest. The trees of these varieties are said to be very prolific, frequently breaking down with their heavy crops. Of pests, the only one observed was a slight infestation of the Florida red scale. Gummosis was observed on a few trees, but as a whole the beautiful dark green trees appeared to be very vigorous and free from pests and diseases.

"The most interesting fact to me was the huge varietal collection of fruit trees that is of great potential value to that region. This planting is not a commercial one, but it seems likely that the information gained from its study will likely be used eventually in the planting of commercial orchards that produce early ripening fruits of fine quality."

HORTICULTURAL CENSUS. An editorial in the Florists Exchange for February 22, quoted by the Daily Digest, says: "Commercial horticulture in America is offered the chance to secure a national census of its production and investment, such as has never before been attempted and such as will prove invaluable in establishing the importance and size of the industry on a new and deserved level. Is it going to take advantage of this opportunity or not? If so, it behooves all horticultural organizations, individuals, firms and other interested agencies throughout the country to communicate with the Census Bureau at Washington, D. C., addressing specifically Dr. W. H. Steuart, and urging emphatically that the special horticultural census now contemplated be taken without fail and in as great detail as possible....The census officials, when interviewed, expressed the opinion that horticulture had, frankly, 'been asleep,' while the poultry and fruit industries had been constantly in touch with the bureau, insisting that increased attention be given to their activities...."

The Secretary has recently issued Service and Regulatory Announcement No. 119, "Regulations for Warehousemen" ~~Storing~~ "Storing Nuts," which supersedes Regulations for Peanut Warehouses Approved September 29, 1923.

LCMEARD
REPORTS ON
FLORIDA WORK.

"I left St. Augustine on February 20," reports P.M. LOMBARD, "for West Palm Beach and stopped at Wabasso to visit a planting of 250 acres there. Mr. Heath is the manager of this particular area which is part of the Indian River Company's holdings. There are 75 acres at Vero Beach. Fortunately they were harvesting at Wabasso. Due to weather conditions this field was not clean and harvesting was done by hand. A Fordson tractor with cultivator attached cut off the side of the rows. A force of 60 colored laborers were hooking them out by hand. The tubers were picked and dumped into 100-lb fertilizer sacks, the laborers receiving 6¢ per sack for digging and picking. The yield varied some on the field, probably averaging 30 bbls. per acre. Both early and late blight hit this section about two weeks ago (February 7-10). I did not stop at Vero Beach or at Fort Pierce but understand that potatoes went down in three days in the Fort Pierce area. There are some potatoes planted at Melbourne and Stuart.

"On the 21st I visited the Brown Company's plantation on the Hillsborough Canal (I reached West Palm Beach at 5 p.m.). Their potato acreage this year is limited to that part of the farm which is protected by the overhead irrigation system, which is slightly less than 200 acres. The Irish Cobbler was planted this year. The seed was grown by Mr. Brown in New Hampshire. This stock carries from 5 to 10% of leaf roll. The plants are not very large, set limited, and tubers beginning to show scab. Vines were well protected with Bordeaux dust. The seedlings we shipped to them for a test has not been planted.

"A large acreage of cabbage, celery, carrots, lettuce and beets are planted this year, all of which are bringing good prices. They are getting \$70.00 a ton for cabbage. Most of the experimental plots are on the 1/100 acre basis and some very interesting results are being secured with different fertilizer combinations. Practically all crops have to be sprayed or dusted and fields are planted so they can use a large power duster that will dust 16 rows with either one or two leads to the row, depending on the nature of the crop. Many decided improvements have taken place since I was here three years ago. Several new buildings have been put up, including a six-room precooling and storage plant, a water purification plant, packing sheds, a large drying, threshing and vine-grinding peanut plant, etc. Rock roads have been built around the buildings and will be extended through the fields in the near future. Dr. Vannah expects to put in a large acreage of peanuts this year. I forgot to mention the greenhouse, which is something new. It is considered hurricane proof, being constructed so that the top and sides can be taken down and packed away during the hurricane season.

"February 24, I went pretty well over the East Glade section where practically all the crops are grown. The potato acreage in the Homestead sections this year is between 800 and 900 acres.

"Mr. Stefney, the county agent, was busy so I went out with Mr. Frank Drew, manager of the F. E. C. Fertilizer Company and Mr. Bullard, a salesman for the same firm. In the afternoon I covered considerable territory alone. Ordinarily, 75 acres is the total potato crop of this section. Since the use of manganese in the fertilizer, the acreage has increased rapidly. Very few realized the necessity of getting modern equipment for the production of potatoes and this year has furnished them a sorry lesson. Aside from 250 acres put in by the Gill Brothers from New York, the yield is going to be from zero to a very small quantity. I saw no fields free from late blight and some were all dead while in others it will only be a matter of a few days before the plants are dead. I saw fields with plants from three inches high to harvesting state. The Gill Brothers came in with modern machinery, did a good job in preparing land and care of crop, and they sprayed consistently. Some of their fields turned out 320 bushels per acre; the field I saw them harvesting, which they claimed was in a run-down condition, was yielding about 250 bushels.

"Tomatoes are still the main crop, upwards of 9,000 acres being put in this year. Spraying is paying big on tomatoes. Beans were not looking so well, the vines were quite yellow and undersized. The East Glades have been too wet for beans this season. As nearly as I can find out, the East Glades are about as frost-free as any part of Florida and there is no question about the production of a large crop of potatoes, if they are handled intelligently. The main planting is about November 15, and harvesting usually begins soon after January 20.

"Returning from Homestead, I called at Chapman Field to see the Foreign Plant Introduction Station, where I met Mr. Edward Simmonds and Mr. T. A. Pennell, superintendent and assistant superintendent. Only sufficient time was taken to permit of looking through the greenhouse and large propagating shed. Mr. Simmonds told me they had a large amount of trouble in this section with damping off fungus. Only sterilized soil is used in the greenhouse, thus keeping it free from this fungus."

ROADSIDE MARKETING. "At the New Jersey Horticultural Society meeting," says the RURAL NEW YORKER, "roadside marketing was discussed at length. One man of several years' experience in this line said that perhaps the greatest advantage, of the roadside market is that produce can be sold there which has been allowed to ripen on the tree or the vine. Peaches, strawberries, cantaloupes, sweet corn and other products can be secured at their height of perfection only from the farm where they are grown. This is where the bona fide farmer has the advantage over the huckster who conducts a roadside market....the farmer with his freshly picked produce can meet this competition."

THE IDEAL
COUNTRY
HOME.

"My ideal country home," said W. R. Beattie, horticulturist, in one of his radio talks, "is located on a slight rise of ground well back from the highway, with a tree-shaded drive leading to it. There is a large, open lawn in front of the house, with a few well selected native shade trees, mainly at the sides of the house, but none of them so close to the house as to densely shade or darken it. The house foundation is screened but not hidden by plantings of shrubbery. Through the vista of trees which surround or flank the house on both sides can be seen the garden and the home orchard and a restricted view of the barns and outbuildings in the background.

"Along the public highway and to the rear of the farm buildings are located the fields of waving grain and the herds of livestock grazing in the pastures. To one side and but a short distance from the farmhouse, a spring-fed brook or branch flows through a meadow with just a hint of good fishing somewhere in its deepest pools. Six miles away, over a concrete road, is the city where the products of the farm find a ready market. The home itself is fitted with every modern convenience and its surroundings have an atmosphere of peace and contentment. This is the type of country home that appeals to all of us and makes the city man long for a place in the country.....

"Give your farm an appropriate name and have the name, together with the name of the owner, painted plainly but not conspicuously on the barn or, better, on a neat signboard at the entrance. Do not lease the roof and sides of your barn for advertising; it is a poor way of getting the barn painted. Signboards in the fields along the roadway do not add anything to the appearance of the farm, but may be permissible under certain conditions and are a fair source of revenue. In no case should the billboards be near the house or where they will detract from the natural beauty of the place."

LOANING In the course of the annual checking of property in the **PROPERTY.** various units of the office, it has been found that a few articles cannot be located because it sometimes happens that some one will go to another office or station and ask for the loan of some item intending to return it within a short time--but forgetting to do so. There is no desire to limit the practice of making our property available to all of our workers where loans can be made without interfering with the work of the office owning the article of equipment, but in the interest of good business methods we must follow the plan of getting a receipt for any inventoriable property loaned. Issue the receipts in duplicate--keeping one copy yourself and giving one to the person borrowing the article. This will keep you informed as to where the article is, and serve to remind the borrower to return it. You know, of course, that there is a standard form authorized by the Fiscal Regulations for loans to outside offices, for transfers, etc.

MEMORANDUM SHOWING METHOD OF PROCEDURE IN ISSUING TRANSPORTATION REQUESTS
FOR PULLMAN ACCOMODATIONS WHERE CHANGE OF CARS EN ROUTE
IS NECESSARY.

"The Travel Regulations require that through rates for Pullman accommodations be secured," says the Office of Accounts of the Bureau of Plant Industry, "and to this end one transportation request should be issued for the space desired for the entire trip, even though change of cars en route is necessary. The request should be presented to the local Pullman agent who is required to enter a reservation for accommodation to the first transfer point on the face of the request and return same to the traveler. The Pullman agent should not be expected to issue a through ticket for the entire trip, but might be prevailed upon to wire for reservation for space beyond the transfer point.

"On boarding the train, the transportation request should be handed to the Pullman conductor who should furnish accommodations, and issue a transfer ticket calling for space beyond the transfer point. On reaching transfer point, traveler should present transfer ticket to the Pullman agent, or if this is impracticable, to the next Pullman conductor, who should furnish accommodations for the balance of the trip."

EXAMPLE: The Office of Accounts illustrates this by an example: A traveler wishes a lower berth, say, from Washington, D. C. to Madison, Wisconsin. There is no through car, and transfer at Chicago is necessary. The local Pullman fare would be \$11.25, while the through rate is but \$9.00. How shall he proceed?

He makes out a transportation request for lower berth from Washington to Madison and presents it to the local Pullman agent. The agent is required to enter reservation to Chicago, and return the request to the traveler. On boarding the train, the traveler hands the request to the Pullman conductor, who is required to furnish the lower berth to Chicago, and to issue a transfer ticket for lower berth from Chicago to Madison. This latter transfer ticket, of course, should be presented to the Pullman agent at Chicago or to the Pullman conductor on the train from Chicago to Madison to secure the berth for the remainder of the trip-- that is from Chicago to Madison.

Should the accommodations originally called for on a request not be available for any portion of the trip, or should Pullman representatives refuse to comply with the suggestions outlined above, these facts should be submitted in writing to Mr. Swartz in order that the matter may be taken up with the Pullman Company for adjustment.

This is a problem that has caused several of our investigators more or less trouble, and we are glad to be able to furnish this statement from our Accounting Office for their future guidance.

EDITORIALLY SPEAKING. John A. Ferrall

ONLY THE BRAVE
DESERVE THE FAIR!

One of George Ade's earlier fables deals with the Fool Killer who, wandering along the road one day with his trusty club in his hand came to a high board fence. Looking over it, he found an enclosure packed and jammed with people. The sun beat down upon them. The dust rose in their nostrils. They mooped their brows and the men carried their coats upon their arms. Children squalled. The din of the mingled noise and music filled the air and sawed at the nerves. "Who put those people in there?" he inquired. "Oh, they went in--it's a fair," said a passerby. "You mean they went in there voluntarily?" demanded the Fool Killer. "Yes--and not only that, they paid to get in". The Fool Killer looked the crowd over speculatively and made a rough estimate of the number in the enclosure. Then he glanced down at his worn club, heaved a sigh of discouragement and hopelessness, and wandered on down the road where he killed a man who did not believe in advertising.

As a matter of fact, the county fair has always been a good advertising medium--and it has become a much better one. Even at its worst, it was useful in bringing growers together for an experience exchange, and to spread a knowledge of the crops being grown, etc. And from the wooden enclosures and tents of a quarter of a century ago the fair has spread and grown until such an event as the Twentieth National Orange Show at San Bernardino, California, attracted 250,000 visitors and had single exhibits, such as that from Los Angeles county, using as many as 25,000 citrus fruits--largely navel oranges. Another of the exhibits at this fair, showing butterflies made up of kumquat oranges, was rather symbolical of the caterpillar-butterfly progress of the county fair.

In Florida, too, it was a matter of extreme satisfaction that the Orange Festival at Winter Haven, and the South Florida Fair at Tampa, were pronounced successes in spite of the trials and tribulations that the past year has brought to growers in that State.

Yes, the county fair has come into its own as a high-class advertising medium, and it has played its full share in giving folks something "to write home about" concerning the horticultural products of the United States. The Citrus fruits--oranges, lemons, grapefruit--of the United States now find a demand in Europe, Asia, Africa, Ceylon, and--Lakrador! The Golden Apples of the Hesperides," of such beauty and value that they were once guarded by dragons and kept in charge of heavenly nymphs in the hidden gardens of an undiscovered continent, are now so widely distributed that they may be purchased at almost any street-corner fruit stand.

And, of course, what applies to the citrus fruits is equally true of many other horticultural products that find their way to the displays at the county fairs.

IN A LIGHTER VEIN.

LIVE AND LEARN! A smooth-talking salesman at a county fair was addressing a small gathering of fruit growers and farmers, advocating a newly-invented piece of equipment. "Now, my friends," he said, warming up to his subject, "apropos--"

"Just a minute, mister," called out one man.

"Well?" said the speaker, pausing in his remarks.

"I have here a pocket dictionary," said the interrupter, "and I want to look up that word 'apropos' before you go on. I'm not going to let you put anything over one me."

"Oh, that's all right," said the salesman, cheerfully. "Now, apropos simply means--"

"Never mind what it means," said the man with the pocket dictionary.

"I'm looking it up. I let a smooth talker sell me a unicycle one time. He said it was the last word in conveyances. When I paid the freight on the box from Chicago, I found that I had bought a wheelbarrow."

And, apropos the matter of ready-made speeches, touched on in the last issue of the NEWS LETTER, a reader sends me this outline:

"I'm glad to see so many present,
 It seems there were two Irishmen...
 Our market club is great and growing,
 Back in the days when we said 'When?!'.
 Cooperation surely is the thing,
 A Swedish guide told this to me....
 Production's doubled in ten years,
 Here's a hot one--tee! hee! hee!
 Selfish growers must be suppressed,
 A friend of mine who likes to pun....
 A quality product--that's the thing,
 Stop me, if you've heard this one...."

AND STILL SPEAKING! The visiting horticulturist had been invited to address the local workers' club in a nearby town, but missing the train, arrived with his wife a trifle late and did not have time to gather any information about local conditions. Hence, that evening, he attempted to generalize a bit before going into his regular talk on growing problems, etc. "Your beautiful little city has made a wonderful impression on me," he began "As my wife and I came in on the train, I said to her: 'Ah, my dear, you and I ought to be living on the top of one of those magnificent hills.'"

At this point the local chairman made an effort to attract the speaker's attention and as the latter bent down, whispered, "Go easy! We have only two hills in town. The jail is on one, and the insane asylum is on the other!"

PERSONAL MENTION

DR. AUCHTER and DR. MAGNESS returned to Washington on March 5, after visiting various horticultural regions in Illinois, Texas, Louisiana, Alabama and Georgia. Tentative plans for starting pecan investigational work in the vicinities of Brownwood and Austin, Texas, were made; the date cooperative experiments at Laredo and Weslaco were examined; and the citrus industry of the lower Rio Grande valley and the fig industry south of Houston, Texas, were rather thoroughly studied. The pecan experimental stations at Shreveport, Louisiana and Albany, Georgia, were visited and plans for additional investigations were discussed with representatives of the office.

DR. AUCHTER also made a trip to Ransomville, New York, on March 11, attending a meeting of fruit growers in Western New York, and delivering an informal address on adjusting orchard production to market requirements.

DAVID GRIFFITHS left Washington March 5 for points in Washington, Oregon and California, in connection with his bulb investigations. He plans to attend the meeting of the Northwest Florists Association at Portland, Oregon, March 23-25.

L. F. BUTLER made a trip from his New York City headquarters to Miami, Florida, to observe and study shipping-point diseases of citrus and to make experiments with particular reference to pox of grapefruit.

E. L. EVINGER left Washington early in March for points in Virginia to take notes on the flowering of narcissus.

LUCIA McCULLOCH visited Nuttall, Virginia, March 1, to select experimental lots of gladioli from storage.

ELMER SNYDER left his permanent station at Fresno, California, March 10, for a trip to Willard, North Carolina, then to Washington, D. C., and to return to California by way of New York and Michigan, conferring with officials, growers and cooperators in connection with his grape investigations.

Among recent visitors in Washington was Dr. B. C. Dodge, for ten years connected with the Fruit Disease work of the office and now pathologist of the New York Botanical Garden. Dr. Dodge's special errand was to secure diseased blackberry plants from some of his marked localities in this neighborhood. He hopes to continue his studies of the orange rust of blackberries during the present summer.

FRED J. PRITCHARD left Washington early in March for Florida, to inspect tomato experiments at Homestead and to help in harvesting the crop.

GEORGE M. DARROW who has recently spent some time in Florida, studying the strawberry industry, reports that the discovery of the cause of strawberry dwarf and the working out of control measures removes the last serious unknown trouble of this berry apparently and there seems to be many reasons to look forward to a considerable expansion of the industry in future years. An interesting observation at Homestead, Florida, was that Marvel blackberries propagated by root cuttings received from northern Florida had a very serious infestation of "double blossom" disease when no other sort had it. There are no native rubus in that section of Florida. Apparently those root cuttings from northern Florida carried the disease organism to Homestead and that in this variety the disease may be systemic.

Notice has been received of a new edition of Yearbook Separate No. 1063--"Citrus Specialists Find New Methods of Propagation"--contributed by WALTER T. SWINGLE and T. RALPH ROBINSON. This is the paper that describes the Y nurse-graft cutting method, producing two well-rooted plants by one operation--the one a rooted cutting, the other a graft on the seedling or rooted cutting used as the nurse graft.

FRANK L. GOLL, representing the Department at the Seville, Spain, exposition, reports that he finally managed to secure a few days vacation and took a short trip with his family to Portugal. Incidentally, he has been made one of the official judges of the Jury of Awards of the Exposition and so is practically living in a dress suit these days. It is going to be an awkward costume for the bowling he expects to do on his return to the United States.

W. J. ZAUMEYER has been honored by having the entire issue of the PLANT DISEASE REPORTER (issued by the Office of Mycology and Disease Survey, Bureau of Plant Industry) for March 1, 1930, given over to his discussion of "Bean Diseases in Western United States in 1929."

Circular 98, of the Department of Agriculture (Chace, Church and Poore) discusses the Wonderful variety of pomegranate. When first marketed this variety brought highly satisfactory returns to the growers with the inevitable results that plantings were increased until over-production became a problem. The circular reports on investigations to establish a satisfactory maturity standard, to develop by-products, methods for utilizing the surplus and cull fruit, etc.

T. RALPH ROBINSON, who has been taking notes on the progress of citrus breeding work in Florida, has just made a short visit to the experimental plantings at Silverhill, Alabama, where hybrids and stock plants, including strains of the Satsuma orange, are being tested.

THE OFFICE OF HORTICULTURAL CROPS AND DISEASES

S E M I - M O N T H L Y N E W S L E T T E R

The Official Organ of the Office of Horticultural Crops and Diseases,
Bureau of Plant Industry, United States Department of Agriculture.

John A. Ferrall, Editor

The material in this NEWS LETTER is of an informal or confidential nature and is not to be reprinted without the prior approval of the Office of Horticultural Crops and Diseases.

Vol. II

Washington, D. C., April 1, 1930

No. 7

HORTICULTURE TRIUMPHANT! An attendance of 201, the largest in its history, marked the 29th Annual Banquet of the Washington Botanical Society, held on March 4. The dinner and program were planned by GEORGE M. DARROW, Vice-President of the Society and Chairman of the Program Committee, who succeeded in making the occasion a splendid demonstration of the horticultural achievements of this office. True, there was reindeer steak from Alaska, and rolls made from Leighty's wheat-rye hybrid, but the diners spent most of their time sampling, with evident satisfaction, horticultural products. Much was added to the enjoyment of the banquet by Knowles Ryerson, in charge of Foreign Plant Introduction for the Bureau, and himself a transplanted horticulturist, who discussed the Department's interest in the things making up the menu--which included:

Muscadine Grape Juice. The cold pressed grape juice served, and which was supplied by CHARLES DEARING, was made from the Thomas variety at the Coastal Plains branch station of the North Carolina Department of Agriculture at Willard, North Carolina, where this office is cooperating in several different lines of work. The Thomas variety, native of the southeastern United States, is very distinct from the northern type of grape. The grape juice served was made without adding sugar and so is a pure fruit juice and not a synthetic product. It has become popular with those who have had an opportunity to get acquainted with it. Utilization studies with Muscadine grapes, which resulted in the standardization of methods for the production of this grape juice and other products, were first undertaken by Dearing at Willard.

Fruit Cocktail. (Washington Navel Oranges from SHAMEL AND POMEROY); U. S. D. A. No. 656 Strawberry (from DARROW and WALDO); and the Young Dewberry (from DARROW and WALDO).



THE NAVAL ORANGE was, of course, introduced by Wm. Saunders of the Department back in 1870, but this office has an especial interest in the present-day development of the industry (the crop now representing an annual value of fifty million dollars) from the fact that "bud selection" has played a leading part in placing citrus growing on its present high plane. For some twenty years A. D. SHAMEL and his associates have devoted their attention to bud selection work, with highly gratifying results. The fruits served at the banquet were produced by trees grown from buds which Shamel brought direct from Brazil, the home of the Navel orange, in 1913-1914.

STRAWBERRIES--U.S.D.A. No. 656. This is a selection from our breeding work (fruits contributed by Darrow and Waldo, as indicated above), and a sort that has surpassed other varieties in the chief strawberry section of Florida. They were grown on the strawberry experiment plots at Plant City, Florida.

The YOUNG DEWBERRY was originated by B. M. Young of Louisiana, and first brought to general notice by GEORGE M. DARROW in 1926, after a test at the Bell, Maryland, station. It has proved widely adapted to the southern part of the United States, from North Carolina to California. The fruits (supplied by Darrow and Waldo) were grown at Willard, N. C. and frozen stored.

Barouni olives. (Supplied by Kearney and Thomas). This olive was introduced from North Africa in 1905, when Thomas H. Kearney of the Bureau sent in nine cuttings. There are now three splendid trees at the Plant Introduction Garden, Chico, California, which grew from these cuttings, and hundreds of trees in the State that have been propagated from these three trees. The olives were furnished by the packers, who sent them to Mr. C. C. Thomas for use at the banquet. The Barouni has a higher oil content than any of the large-fruited varieties and ripens two or three weeks earlier than the Mission olive, thus reducing danger of frost injury--a very important factor in the ripe olive industry.

Reindeer Steak, with Mushrooms. There are now more than a million reindeer in Alaska, the result of an introduction from Siberia made in 1891 by Sheldon Jackson of the Bureau of Education. It is estimated that Alaska can support from six to seven million, making two million available for marketing each year, which is tough news for the vegetarians. It may prove to be tough news for meat eaters as well, for, commenting on the remarks of a speaker at the banquet to the effect that the reindeer providing the steaks had probably browsed on lichens, a distinguished botanist was heard to remark: "Mine must have made a mistake and eaten some of the rocks as well." However, most of the steaks were excellent.

The mushrooms came from the experimental beds at Arlington Farm, through the cooperation of E. B. Lambert. Few people realize that there is

such a thing as a commercial mushroom culture in this country, yet the annual production now exceeds fifteen million pounds, and it is not unusual for the New York City market to consume thirty tons of fresh mushrooms in a single day--a record beaten, pro rata, at the banquet.

Potatoes. C. F. CLARKE offered a seedling variety originated by him in 1923 by crossing two other seedlings whose parentage traces back to the commercial varieties known as Rural New Yorker, Busola, Arcostock Wonder, and Sutton's Flourball. It is one of several being developed for resistance to virus disease and the results of seven years' tests indicates that it is very highly resistant to mild mosaic. Since there appears to have been no mild mosaic present at the banquet, the resistance of the potatoes to attacks was not in evidence.

Chayotes (Fairchild and Young). This is a vegetable, usually pear shaped, belonging to the family of the cucumber and squash. A native of the highlands of Guatemala, it is now cultivated in most of the warmer regions of the world. The fruits were contributed by David Fairchild and R. A. Young.

String Beans. These were the result of a cross of the Refugee Wax and Unrivalled Wax, made by G. H. RIEMAN, agent of this office, to secure beans resisted to blight and anthracnose. The specimens were furnished by the packers, and show dominance of the pollen parent as to quality.

Rolls. The flour from which the "Rolls Rye-ces" were made for the banquet traces its ancestry to a hybrid between wheat and rye found in a wheat plot at Arlington Farm several years ago.

Lettuce. Behind the lettuce served at the banquet lies one of the most amazing "success" stories of the office. About 27,000 of the 38,000 acres of lettuce grown in the Imperial Valley of California the past winter were of the varieties served--Imperial No. 2, No. 3 and No. 6--all originated by IVAN C. JAGGER. An organization representing the Imperial Valley stated some months ago, "Dr. Jagger's resistant lettuce is the one thing that has made it possible to carry on the lettuce industry in Imperial Valley." Putting the matter in dollars and cents, the value of the lettuce grown on these 27,000 acres of Jagger varieties was from \$8,000,000 to \$10,000,000 in California--and from \$15,000,000 to \$20,000,000 in the eastern markets! It--but accomplishments of this sort demand a book, not a paragraph.

Tomatoes. And-speaking of achievements--consider this Marglobe tomato, originated by F. J. PRITCHARD and introduced in 1924. Its superior qualities have lead to increased acreage year after year until it is now grown almost exclusively in Florida, extensively in the Atlantic Coast States, Texas and the Middle West--and over the border. And--the crop for 1929 had an estimated value of \$20,000,000.00!



Panariti currant grapes (Husmann). The Panariti currant grape was introduced by David Fairchild of the office of Foreign Plant Introduction. However, this office shares in the present achievements of the industry, the annual value of the crop being from \$15,000,000.00 to \$25,000,000.00, from the fact that the grapes when first introduced did not succeed. Something was lacking. The practice of girdling the vines in currant grape growing was known, but the secret which the inhabitants of the currant-producing countries would not divulge was rediscovered by GEORGE C. HUSMANN--that the girdling to be effective must be done when the vines are blooming. This rediscovery made possible the present successful production of "dried currants" in this country.

Ices, Sherberts, Ice Cream. Merely to show its versatility, a portion of the supply of the Young Dewberry contributed by Messrs. Darrow and Waldo was passed along to the experts of the Dairy Division who performed the necessary legerdemain for transforming it into ices, sherberts and ice cream. The only thing left to show the results of this demonstration were several large cans-empty.

Decorations. That the work of the office is useful as well as ornamental has been taken for granted, but Dr. Darrow took advantage of the banquet to emphasize the fact that it is ornamental as well as useful, and the decorations brought forth a barrage of favorable comments. There were amaryllis, roses, and carnations originated at the Department's greenhouses; the Golden Wedding, Arlington and Innocence carnations originated by August Meyer at Arlington Farm; tulips, lilies, chinchin-gee and daffodils, demonstrating the work of DAVID GRIFFITHS; two great clusters of Golden Dwarf coconut from the Chapman Field (Coconut Grove, Florida) station of the office of Foreign Plant Introduction; and, attracting much attention, seventeen bud-sports of Citrus sent in by C. S. POMEROY.

HORTICULTURAL FASHION AIDS. One would not be apt to think, offhand, that horticultural progress was affected by fashions, but it is the opinion of experts, pretty well supported by evidence, that the "slim figure craze" of the past few years has been a decided asset to horticulture. "The modern feminine desire for slenderness," says Prof. James L. Boyle of Cornell University, "has altered market standards, and considerably affected the wheat sales of the world." Meat consumption has also declined, since those in search of the necessary vitamins seek them in "reducing" foods such as oranges, grapefruit, pineapples, lettuce, tomatoes, etc. This goes to the credit side of our ledger, of course, but we have to face the fact that there is a debit item, too. The fair ones have been avoiding the potato along with meat and bread. Well, one can't have everything!

APPOINTMENT OF
AGENTS ON CO-
OPERATIVE WORK.

Dr. Taylor, in Bureau of Plant Industry Memo. No. 481, dated February 19, 1930, and just being distributed, refers to the appointment of agents on cooperative work and points out that:

"The appointment of agents on cooperative work is authorized by the Civil Service Commission in recognition of a joint responsibility for the employee and the rights of both parties to have a hand in selecting the personnel. The appointment of agents will be considered only where the work is cooperative and is covered by a memorandum of understanding showing clearly the kind of work and the relations thereto of the parties in the cooperation. Where the work is of a permanent character, and where the matter of selecting personnel is left in the hands of the Department, appointment should be made from Civil Service registers, rather than as agent. Generally speaking, the appointment of agents for indefinite periods but where the employment is likely to be permanent should be considered only when it is practically unavoidable. Contacts with candidates with a view to employment should not be made until final determination has been reached in the Bureau as to whether a vacancy will be filled from Civil Service registers or through authorizing the appointment of agents. The foregoing is not intended to apply to such cooperative activities, as barberry eradication, blister rust control, citrus canker eradication, etc.

"Where the appointment of an agent is intended to cover a season's work, probably not exceeding a maximum of nine months, the appointment should be made "for a temporary period". Where it is expected that the individual appointed will be continued for more than a season's work, the appointment should be made "for an indefinite period". Leave cannot be granted agents employed on a temporary basis, but the usual leave, namely 1-1/4 days per month, will be allowed agents employed for an indefinite period, accruing from the date the appointment became effective. Agents employed on a temporary basis, whose appointments are later extended for an indefinite period, may be granted leave from the date the temporary appointment became effective, unless the temporary appointment was on a part time basis. In all cases, annual and sick leave is on a calendar basis, and is not accumulative.

"Occasionally it appears desirable that an agent have an operating title other than the designation "agent". Where this is desirable, an operating title, the equivalent title of a regular member of our staff receiving the same salary, may be included in the appointment in parenthesis following the title "agent". The use of the operating title is authorized for informal use, but not for publication."

THAT REMINDS ME--

THAT while employees are permitted to prepare articles for outside publication, deliver addresses and radio talks, etc., WHERE SUCH MATERIAL TREATS IN ANY WAY OF THE WORK OR POLICIES OF THE BUREAU OR DEPARTMENT, or the work of other bureaus or departments, it must be submitted (through Dr. Auchter) to the Chief of Bureau in order that he may secure approval of publication BEFORE the article is offered for publication or the address delivered. There is no objection to a preliminary discussion with publishers. In fact, in asking for the approval of outside publication of an of an article we prefer to be able to give title, name of author, publication in which it is to be printed, and to state whether compensation will be received. But the articles must not be submitted for actual publication BEFORE you receive word that such publication has been approved. Where practicable, three copies of articles or proposed addresses should be sent in--the original to be returned to the author with any suggested changes, etc.; carbon to be sent by Dr. Taylor to the Office of Information along with the request for approval of publication and to be filed in the latter office; and one carbon for our files.

THAT unless report is made to your immediate official superior within 48 hours of any injury incurred in connection with your official work, you are not entitled to the benefits of the Employees Compensation Act.

THAT you should enter a full description of all inventoriable articles on the subvoucher when such items are purchased under your letter of authorization. Sometimes descriptions are so meager it is impossible for us to decide just what the article is.

THAT parts of machines and other articles which have become unserviceable or for which you have no further use in their entireties may, IN THE DISCRETION OF BOARDS OF SURVEY, be retained for use in repair, construction work, etc. This means that you must secure approval before using parts of an old machine, for example, to repair a similar machine. This is because we have to drop the old machine from our office inventory, take up the parts as expendable property, etc.

THAT the following States grant exemption from the State tax upon gasoline: California, Florida, Idaho, Illinois, Iowa, Kansas, Louisiana, Michigan, Minnesota, Missouri, Montana, Nebraska, New Jersey, New Mexico, Oklahoma, Oregon, Pennsylvania, Rhode Island, Utah, Vermont, Washington, West Virginia, and Wisconsin. Vouchers covering gasoline purchases in these States should contain the notation "STATE TAX NOT INCLUDED" and state whether the dealer pays the tax direct to the State or not. If he refuses to grant exemption it is necessary that a statement be attached to the voucher showing why he refused to allow it.

EDITORIALLY SPEAKING. By John A. Ferrall.

BACK TO THE TREE TOPS? J. Russell Smith in "Tree Crops: A Permanent Agriculture," appears to be trying to drive the human race back to the trees again. In its review of the book, the JOURNAL OF HEREDITY says. "Its aim is to pioneer a new form of agronomic agriculture and thereby push into the remote future that gloomy day envisaged by the followers of Malthus when the earth's population will require more food than can be produced." Dr. Smith explains, however, that the chief object of the book is to "urge new foods for animals rather than men." He adds: "When tree agriculture is established, chestnut and acorn orchards may produce great forage crops and other orchards may be yielding persimmons or mulberries, crops which pigs, chickens and turkeys will harvest by picking up their own food from the ground. Still other trees will be dropping their tons of beans to be made into bran substitutes. Walnut, filbert, pecan and other hickory trees will be giving us nuts for protein and fat".

Tree culture is not new, of course, and tree crops have been a mainstay in many of the drier parts of Southern Europe and Northern Africa and Asia for centuries. The possibilities offered in the substitution of tree crops for shallow-rooted annuals are always interesting, and as long ago as 1906, DR. WALTER T. SWINGLE secured approval of a project for investigations on "Arboriculture, with especial reference to the utilization of tree crops in dryland regions." In such regions tree crops are an insurance against failure due to severe drought, since deep-rooted and drought-resistant trees are able to pass through dry periods fatal to ordinary annual crops and to most perennials. Dr. Swingle became interested in the subject while traveling abroad as an agricultural explorer for the Department and he was especially struck by the prospective value of the carob (the food of the Prodigal Son!) which yields a concentrated stock food that is extensively used abroad, especially in Italy, as a substitute for oats in feeding horses.

Some years ago while traveling in Japan and China Dr. Swingle secured a few plants of the so-called "strawberry tree" (*Myrica rubra*). An enterprising reporter learned of this introduction and hastened to put on paper an account of the "strawberries" that grew on trees. Unfortunately, he could not resist the impulse to embellish his account. So he added the interesting information(!) that the "strawberries" had properties tending to reduce the weight and improve the complexion of those who ate them. This, of course, had absolutely no justification in fact, but it made interesting reading, and the item was copied by the press associations and spread all over the country. A flood of correspondence to the Department resulted--some of it rather pathetic. There was, for example, one woman who wrote for some of the fruit (not the plants) immediately, because her husband had threatened to divorce her if she did not reduce forty pounds!

 IN A LIGHTER VEIN

FARM ANIMALS: "The cow," declares a city man, writing to the **BALTIMORE THE COW.** **SUN** concerning his observations on a visit to the farm, "is a female quadruped with an alto voice and a countenance in which there is no guile. She collaborates with the pump in the production of a liquid called milk, provides the filler for hash, and is at last skinned by those she has benefitted --as mortals commonly are. The young cow is called a calf, and is used in the manufacture of chicken salad. The cow's tail is mounted aft and has a universal joint. It is used to disturb marauding flies, and a tassel at the end has unique educational value. Persons who milk cows and come often in contact with the tasse have vocabularies of peculiar and impressive force. The cow has no upper plate. All her teeth are parked in the lower part of her face. The arrangement was perfected by an efficiency expert to keep her from gumming things up. As a result she bites things up and gums down. A slice of cow is worth 8¢ in the cow, 14¢ in the hands of the packer, and \$2.40 in a restaurant that specializes in atmosphere. The male cow is called a bull and is lassoed along the Colorado, fought south of the Rio Grande, and shot elsewhere."

UTILIZATION STUDIES!

I eat my peas with honey,
 I've done it all my life.
 They do taste kind of funny,
 But it keeps them on the knife.

BEEF SUBSTITUTES The experience of those diners who happened upon a tough portion of reindeer steak was a whole lot less trying than that reported of the American soldier in Paris who insisted upon trying a portion of horse flesh in one of the restaurants. As he struggled with it, his companion said, "Pretty tough, isn't it?" The soldier nodded. "It's all right," he said, "but it seems to me they ought to take the harness off these work horses before utilizing them as food."

PRETTYING UP THE FARM HOME. A farmer who takes quite seriously the theory that the farm home should be kept attractive, had been touching up things here and there and came back to the house just before noon. He found a man sitting on the bench near the gate. "Good morning," said the latter, cheerfully. "I'm a poet--I am out here to get local color for a pastoral poem."
 "Well, I guess you're getting the local color all right," said the farmer. "I just painted that bench you are sitting on this morning."



PERSONAL MENTION

CHARLES E. SANDO was initiated as Chemist of Special Merit at Alpha Rho Chapter of Alpha Chi Sigma at the University of Maryland on March 8.

J. R. MAGNESS visited Crono, Maine, the last week in March to attend the Maine State Pomological Society meetings, and to give informal talks on factors influencing the size and quality of fruits, and those influencing the storage life of apples.

J. C. JAGGER presented, at the March meeting of the Synapsis Club of Riverside, California, an outline of his work on the breeding of disease-resistant strains of lettuce. He told of his experience during the past few years in the Imperial Valley, at Chula Vista, California, and in England.

A. D. SHAMEL acted as judge for oranges, and C. S. POMEROY for lemons at the National Orange Show, San Bernardino, California. Each year in connection with this show there is held a junior citrus fruit judging contest by teams representing various high schools of southern California. This year fourteen schools were represented, with 26 first year and second year teams of three students each. Judgments were made by them on classes of oranges, lemons, grapefruit and on packed boxes of oranges and lemon, their reasons for the placings being given orally to the judges. POMEROY also acted as one of the judges in the fruit and vegetable division of the Imperial County fair at Imperial, California.

FRED L. HUSMANN, Napa, California, reports the experimental bench grafting of cuttings as well as rooted vines to be placed in the grape nursery on the Department's experiment vineyard at Oakville, California, completed, as is this spring's distribution of vines and cuttings from that place. During a recent rainstorm there was a fall of 4.29 inches, making the total to that date for this rainy season 23.23 inches.

ELMER SNYDER, who reached Washington late in March for a conference with officials concerning general grape investigations, sent in before leaving Fresno, California samples of fifteen grape varieties from the Department's experiment vineyard there. He reports a few much needed showers just before his departure, the rainfall to date being some two inches below the normal for this time of year.

A call has been received and permission granted by Dr. Taylor for GEO. C. HUSMANN to prepare a memoir responding for the United States to an inquiry which the Revue Viticulture of France is making on the Fiftieth Anniversary of the advent and destruction by phylloxera of the vinifera grape industry and the extent of its reconstruction since by means of American grape species resistant to phylloxera.

GEO. C. HUSMANN also reports that the pruning of vines at the Arlington Varietal Vineyard on Arlington Farm, Rosslyn, Virginia, and this year's spring distribution of grape vines and cuttings, plantings and replantings in the vineyard, have been completed. As indicated in the report of the Botanical Society dinner menu in this NEWS LETTER, the currant grapes served represented a special grape industry established in this country as a direct result of the viticultural investigations of this office.

A publication of interest to our citrus fruit investigators is Technical Bulletin No. 163, "Inheritance of Composition of Washington Navel Oranges of Various Strains Propagated as Bud Variants." This is issued from the Food Research Division (Laboratory of Fruit and Vegetable Chemistry) of the Bureau of Chemistry and Soils. The authors are E. M. Chace and C. G. Church. The composition of 18 strains of the Washington Navel orange, isolated and described by SEAMEL, SCOTT, POMEROY and CARYL, has been studied.

Whitney Coombs of the Bureau of Agricultural Economics is the author of Technical Bulletin No. 172, "Taxation on Farm Property," which is a summary of research work in farm taxation that has been carried on for the past eight years. It should prove very useful to those who wish a general understanding of the kind of taxes paid by farm owners and operators.

T. RALPH ROBINSON contributes to the Journal of Heredity for January, 1930, an interesting account of tenting experiments carried on in Florida to test the pollen sterility of the Collinson avocado.

J. R. BEATTIE visited Rocky Mount, North Carolina, to attend a meeting of the peanut growers and shippers of the Upper Coastal Plain experiment station.

D. F. FISHER is in Washington conferring with Bureau officials concerning plans for future work and in connection with general horticultural problems.

MARY K. BRYAN, discussing bacterial leaf spot of squash in the same issue of the Journal, describes a bacterial leaf spot which attacks summer and winter squashes and pumpkins. The disease can be transmitted to watermelon by inoculation, but had not been found occurring on this plant in the field, nor has it been found on cucumbers or muskmelons.

The team representing the Bureau of Plant Industry won the 1929-30 championship of the Agriculture Interbureau Duckpin League. This circuit is made up of ten teams representing various Bureaus and offices of the Department, and bowls from September to April. The winners are captained by Jack Ferrall of Horticultural Crops and Diseases.

THE OFFICE OF HORTICULTURAL CROPS AND DISEASES

SEMI-MONTHLY NEWS LETTER

The Official Organ of the Office of Horticultural Crops and Diseases,
Bureau of Plant Industry, United States Department of Agriculture

John A. Ferrall, Editor

All material contained in this NEWS LETTER is confidential and is not
for publication without the prior approval of the Office of Horticultural
Crops and Diseases.

Vol. II

Washington, D. C., April 15, 1930

No. 8

VEGETABLE
STANDARDS AND
DESCRIPTIONS.

At the Des Moines meetings last December, VICTOR
R. BOSWELL, senior horticulturist, gave an outline of
the first year's work upon standards and descriptions
of American varieties of vegetables. It was only a

little over a year ago that funds were made available for this important
work and the foundation for it had to be laid through extended
conferences with Bureau officials, with representatives of the canning
and vegetable growing industries, the seed trade and with State experiment
station workers, to determine the greatest need of the industry
and the type of program apt to produce the best and quickest results.

"Throughout the development of this work," said Dr. Boswell, "emphasis
has been placed upon the importance of close contact with the
industry since the work is being taken up in response to the demands
of the industry and is being designed as a service to it. It has not
been possible to expand our activities so as to cooperate with all of
those interested as yet, but an attempt has been made to establish
investigations over as wide a range of conditions as possible.

"The object of the work is to find and adequately describe the existing
type of each of the important commercial varieties of certain
crops which most nearly conform to the generally accepted ideal for that
variety. In making the selection, the best opinions among canners,
seedsmen, growers and investigators are considered. Naturally, activities
at present are confined to the more important commercial varieties.
An effort to include all listed varieties, although desirable, does
not appear practicable. The greatest demand from the industry seems to
be for as prompt establishment of adequate standards and descriptions
of the important varieties as possible, rather than for descriptions of
all existing varieties and synonyms.

"Each stock is to be grown under each of several widely different sets of conditions over a period of three years, at the end of which time it is believed that a definite choice of a standard and an adequate description of it can be established. Most varietal descriptions in the past have been largely based on comparisons and points of differences between varieties,--descriptions of little value to the layman because he is not familiar with the varieties used as a basis for description and comparison. It is believed that if differences actually exist between supposedly distinct varieties each can be described in terms of size, shape, color, time of maturity, etc., these terms to be referred to commonly known standards so that the description will be intelligible to those who are not widely familiar with varieties. An important feature of this description work is the use of adequate photographs, drawings and illustrations in natural colors."

In the first year's work a small list, decided upon after consultation with representatives of the various phases of the industry, of the most important varieties of tomatoes, cabbages and peas was studied. An effort was made to select those varieties constituting 80-85 per cent or more of the seed handled. Numerous stocks of each of the varieties selected were secured from original sources, the growers who produce them, instead of ordering very extensively from dealers who are not producers, since this method is believed to give better stocks and eliminate much useless duplication. Sufficient seed has been secured to supply all collaborators for a period of three years. The sources of all stocks are kept entirely confidential in order to eliminate possible prejudice in making decisions, and to avoid any possible unfair discrimination in favor of, or against private enterprise.

"All details of plot technique such as planting distance, sizes and arrangement of plots, and methods of growing plants as well as the securing of all data have been executed according to a uniform, pre-arranged plan. All photographs have been taken to the same scale and in most cases with the same character of photographic material. The measurements to be used as a basis for descriptions have been worked up in a uniform manner and the season's results have been worked over and discussed by the entire group in conference. It is planned to hold at the end of each year's work, regional conferences in which a group of workers upon a particular crop shall gather for the purpose of working over and discussing the season's results and planning the next season's work. During the growing season the various collaborators have had an opportunity to visit the plots of certain other collaborators so as to learn how the various stocks behave under conditions different from their own....

"In the beginning of this program the objection was raised that individual workers in different parts of the country would so differ in their ideas concerning the excellence of certain strains that there could be no agreement nor conclusions reached in the matter of recommending an ideal type. The past year's experience has indicated

that this objection is not nearly so serious as might be supposed. It is interesting to note that in many cases the same strain of any given variety was chosen as the ideal by all the workers. Where there was a difference of opinion about the strain to be selected, it was usually found that the differences of opinion were very slight and that the two or more strains over which there was disagreement were really quite similar. There were two cases, however, in which this general agreement did not hold. These differences of opinion are typical of what will frequently arise in the course of this work, but there is little doubt that agreements can be reached which will satisfy a sufficiently large number of people to insure the acceptance of a standard. The surprising thing has been that there has been so little disagreement in this connection....

"December 19 to 20, the entire group of collaborators met in Washington, D.C. to discuss the year's results and make recommendations for the coming season. It is of course too early to make recommendations concerning the ideal or standard for any variety but agreement has been reached tentatively on the first year's work. These tentative conclusions are, of course, subject to change. It is planned to drop certain of the least desirable stocks of different varieties in order to eliminate unproductive effort; to increase the size of the plantings of the desirable strains to furnish a larger mass of material which will be desirable for description. With accumulated experience and the elimination of some of the less desirable strains it will be possible to increase the list of varieties....

"One of the most difficult readings to make in varietal studies is that of color. The few color standards available in this country are rather expensive to purchase and they consist of such a small number of tints and shades of the various hues that wide gaps exist between them. It is a frequent experience that when one attempts to match a certain color of leaf or fruit, the existing color is found to be quite different from any represented in the standard.

"It is hoped that as the work expands, more and more cooperators will be taken into the project until the country is adequately covered by an extensive series of varietal studies, all carried on under a uniform and unified plan. It is too early to predict results, but with the full cooperation of all agencies interested, we feel that quite worth-while results shall follow, to the mutual benefit of all concerned."

The representatives of the office are unanimous in their appreciation of the very satisfactory and perfectly fine cooperative relationships that have been present throughout the planning and initiation of this work.

SPECIAL NOTICE

It is expected of those having letters of authorization that they shall keep a careful record of their expenditures under such authorizations--and keep within the amounts authorized. Where the amounts prove to be insufficient to meet the needs of the work, an amendment increasing the amount authorized should be requested. This should be sent in sufficiently in advance to enable the Washington office to act upon it and to notify you before any expense is incurred that would overdraw the original amount authorized. Generally speaking, at least ten days advance notice should be given.

With the itemized statement of authorization expenditures which have been sent out, and the special means provided you for keeping an up-to-date record of authorization expenditures, we are justified in insisting that no vouchers be mailed to this office unless there is a sufficient balance on hand to pay them.

E. C. AUCHTER,
Principal Horticulturist in Charge.

Washington, D. C.,
April 9, 1930

PURCHASES, ETC. FROM GOVERNMENT EMPLOYEES.. "Questions frequently arise as to what relations between Government employees are permissible in connection with the matter of furnishing supplies, meals and lodging, automobile hire and contracting with the Government in various ways," says B.P.I.Memo, 486, dated March 21, 1930. "This matter is dealt with in the Property and Travel Regulations of the Department and has also been the subject of a long line of decisions by the Comptroller General, based on Section 1765 of the Revised Statutes:

'No officer in any branch of the public service, or any other person whose salary, pay, or emoluments are fixed by law or regulations, shall receive any additional pay, extra allowance, or compensation, in any form whatever, for the disbursement of public money, or for any other service or duty whatever, unless the same is authorized by law, and the appropriation therefor explicitly states that it is for such additional pay, extra allowance, or compensation.'

"The following summary of regulations and decisions by the Comptroller General may prove helpful.

"Supplies or Property - No supplies or property for the use of the Department shall be purchased from any of its employees without the approval of the Director of Purchase and Sales. The request for such approval must in each case be accompanied by a statement in writing from the officer certifying the voucher, showing the necessity for the purchase and indicating specifically that the purchase from the employee will be more advantageous to the Government than a purchase from any other source. (Property Regulations, Page 209, Paragraph 227).

"Meals and Lodging - Reimbursement for meals and lodging furnished a Government employee by a member of his family, by another Government employee, or by a member of the family of another Government employee, is not authorized unless it can be shown that it was impracticable to obtain meals and lodging otherwise and that the member of the family furnishing the service is not dependent upon the traveler for support. (Travel Regulations, Page 15, Paragraph 47-C, 7 Comp. Gen. 348, Comp. Gen. A-9242, Comp. Gen. A-14940).

"However, a Government employee in a bona fide travel status on a per diem basis while at a place other than the place of his residence or actual home who procures subsistence and lodging by renting an apartment which he occupies with his wife who prepares his meals is entitled to the full per diem in lieu of subsistence. In such cases the Comptroller General has ruled that the employee may be considered as subsisting himself and is entitled to the full per diem allowance. (9 Comp. Gen. 140).



"Automobile Hire - Reimbursement from public funds for the hire of an automobile of one employee from another employee, or from any member of the family of himself or another employee, is not authorized. The hire of an automobile by an employee for himself is contrary to the regulations and any arrangement purporting to be a hire from a wife, especially if the wife has not a separate estate recognized by law, is construed to be the same as hiring from the husband. Such cases obviously raise the question of indirect benefit to the employee by increasing his compensation, and tend to indicate the existence of a reciprocal arrangement. (4 Comp. Gen.370,4 Comp. Gen. 271).

"There are occasional instances where an employee who is authorized to use his own personally owned automobile for official business at 7 cents per mile will be absent from his station for considerable periods of time. Where it is obvious that the use of the car will be beneficial in the conduct of official work, it is permissible to authorize another employee to use the car in the absence of the first employee, reimbursement at the authorized rate to be made to the employee owning the car. (6 Comp. Gen.175).

"Reimbursement for expenditures made under the conditions noted above has been interpreted by the Comptroller General as not being in accordance with Section 1765 of the Revised Statutes and indirectly augmenting official compensation through private transactions with the Government. Payment from public funds for such purposes is therefore unauthorized. Exceptions have occasionally been made in cases where meals and lodging have been furnished an employee by the wife of another employee who is in possession of a separate estate and where payment obviously does not inure to the benefit of the husband. It should be recognized, however, that in many cases such an arrangement creates an undesirable situation subject to criticism and upon these grounds may be disapproved as not being lawful and proper.

"Your hearty cooperation is requested in effecting a careful check on any expenditures which might fall in any of the classes noted above. Every effort should be made to insure that our Bureau practices conform to all Department regulations and the decisions of the Comptroller General."

SHORT TONS-- "Under the assumption that the commercial custom in
AND LONG TONS. any particular neighborhood is uniform as to whether a
 long ton (2,240 pounds) or a short ton (200 pounds) is
the measure of a ton of coal in the locality," says the Department's
Accounting Officer, "this office has been accepting field bids on coal
where the specifications have been silent as to the number of pounds per
ton. Recently, however, the General Accounting Office has indirectly
challenged the practice, and it is therefore requested that such instruc-
tions be issued to your field stations as will insure hereafter definite
information in all specifications for coal as to the number of pounds in
a ton offered under the specifications."

THAT REMINDS ME--

THAT all discounts allowed for prompt payment of vouchers should be indicated plainly by inserting the information in the spaces provided for the same immediately above the "item" column on the voucher form--or if ordinary commercial bill form is used, indicate discount clearly. All vouchers which provide for discounts should be mailed to us promptly in order that payment may be made within the discount period.

THAT, in connection with the employment of labor, the Fiscal Regulations prohibit the employment of any workman FOR MORE THAN EIGHT HOURS IN ANY ONE DAY except in cases of unusual emergency--fires, floods, etc. Where such emergencies arise the voucher should be accompanied by a statement showing the nature of the emergency. This is necessary before the voucher can be considered for payment.

THAT a number of leases, cooperative agreements, memorands of understanding, etc. have had to be made retroactive when drawn up at Washington. It is desired to discontinue this practice and data for the preparation of such leases, agreements, etc. SHOULD BE SUBMITTED TO WASHINGTON AT LEAST THIRTY DAYS IN ADVANCE OF THE DATE IT IS PLANNED TO HAVE THE AGREEMENTS TAKE EFFECT.

THAT where vouchers are returned for correction it is necessary that the corrected TOTAL be initialed by the PAYEE who signed the voucher originally. For example, if the voucher is signed JOHN SMITH CO., Per James Brown, the change in the total should be initialed by the same person signing the original voucher--James Brown. In the case of a correction in the total of an expense account, the erasure (correction) should be initialed by the payee.

ANNOUNCEMENT

RAISIN EXHIBIT The Office of Horticultural Crops and Diseases cordially invites those interested in products made from grapes to inspect an exhibit of raisins cured in the fall of 1929, in the Department's Experiment Vineyard near Fresno, California, from 23 varieties of dual purpose grapes of exceptionally high quality which also have especial merit as eating, shipping and juice grapes.

The exhibit is staged in Room 420, at 220 14th Street, SW, and will be open for inspection from April 14 to 19, 1930. Everyone is welcome.

AND REMEMBER--we require TWO copies of all vouchers, TWO copies of itinerary reports, and THREE copies of statement covering the use of personally-owned automobiles.

EDITORIALLY SPEAKING. John A. Ferrall

PROPAGANDA GETS CHILLY RECEPTION FROM FROZEN-PACK EXPERT.

According to a popular story, the butcher was devoting especial attention to the young wife who was ordering her first chicken. "Shall I draw it for you, madam?" he asked, when the sale appeared made. "No, thank you," she replied. "Your description of it is quite sufficient." Well, the frozen-pack experts insist that they are going to eliminate the possibility of such blunders--by making it possible for us to purchase almost anything we need in packages. The meat packers, they tell us, are making ready to turn out their products in the form of packaged, frozen, consumer-cut meat, etc.

Horticulturally, of course, we are interested in the frozen pack as applied to fruits and vegetables, and H. C. DIEHL discusses in "Food Industries" for April the need for more research in this field. The freezing of fruits in large containers such as the fifty-gallon barrel, is already a well established business, he points out, but other factors deserve consideration in connection with the satisfactory development of frozen-pack fruits and vegetables for distribution in small containers.

"A conservative examination of the facts already assembled by research and experience," he suggests, "will probably reveal that many technical problems are as yet imperfectly understood; that the solutions offered for many of these problems are matters of opinion rather than of established fact, and that preservation by freezing is indeed a useful and promising, but not an unlimited means for the wider and more satisfactory distribution of certain foods. In the consideration of fruits and vegetables especially, one cannot escape the conclusion that a gradual conservative development, keeping pace with the essential facts developed by research and paralleling the solution of the problem of distribution, is not only to be preferred but is absolutely essential to a stabilized future for the industry. Research seems to be particularly essential at present, for no young food industry can hope to develop without many costly mistakes if it ignores the technical foundations upon which it rests."

He expresses gratification over the broader conception of the frozen food industry, gained during a recent trip through the East, and is particularly impressed with the healthy slowing up of frozen-pack enthusiasm in the fruit and vegetable field "a sort of stock taking and self evaluation and a realization that optimism and high pressure enthusiasm cannot take the place of research and organization as permanent foundation stones in the structure which frozen pack hopes to build in the food industry," he writes. "To some, this momentary breathing spell seems evidence that frozen pack has failed; to me it is a very desirable state of affairs and one that we deliberately set about to help create by the manner in which our results were presented to the public."

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IN A LIGHTER VEIN.

Believe it or Not. An investigator had an experimental tract far up in the mountains, cared for by a man and his wife, the only people living within miles. The wife, decidedly the head of the family, was quite ill when the investigator visited the tract and he finally persuaded the couple to let him bring a doctor from the nearest town. They had never received medical attention before and had no faith in it. The Doctor was brought in the investigator's car. One of his first acts was to put a thermometer into the woman's mouth, telling her to keep her mouth shut for a little while.

As the doctor left the house sometime later and was getting into the automobile the husband came out and approached him. "Say, Doctor," he said, in a confidential tone, "what would you take for that thing--"thermometer you call it?"

And-Speaking of Wives: A Western agricultural paper reports that two mid-western business men recently attended a trade convention in a nearby city and managed to break away from their wives long enough for a quiet little dinner together in a cafe. At the end of the meal the waiter asked, "Shall I bring in a couple of demi-tasses?"

"Gosh, no," replied one of the men. "Our wives might come in any minute."

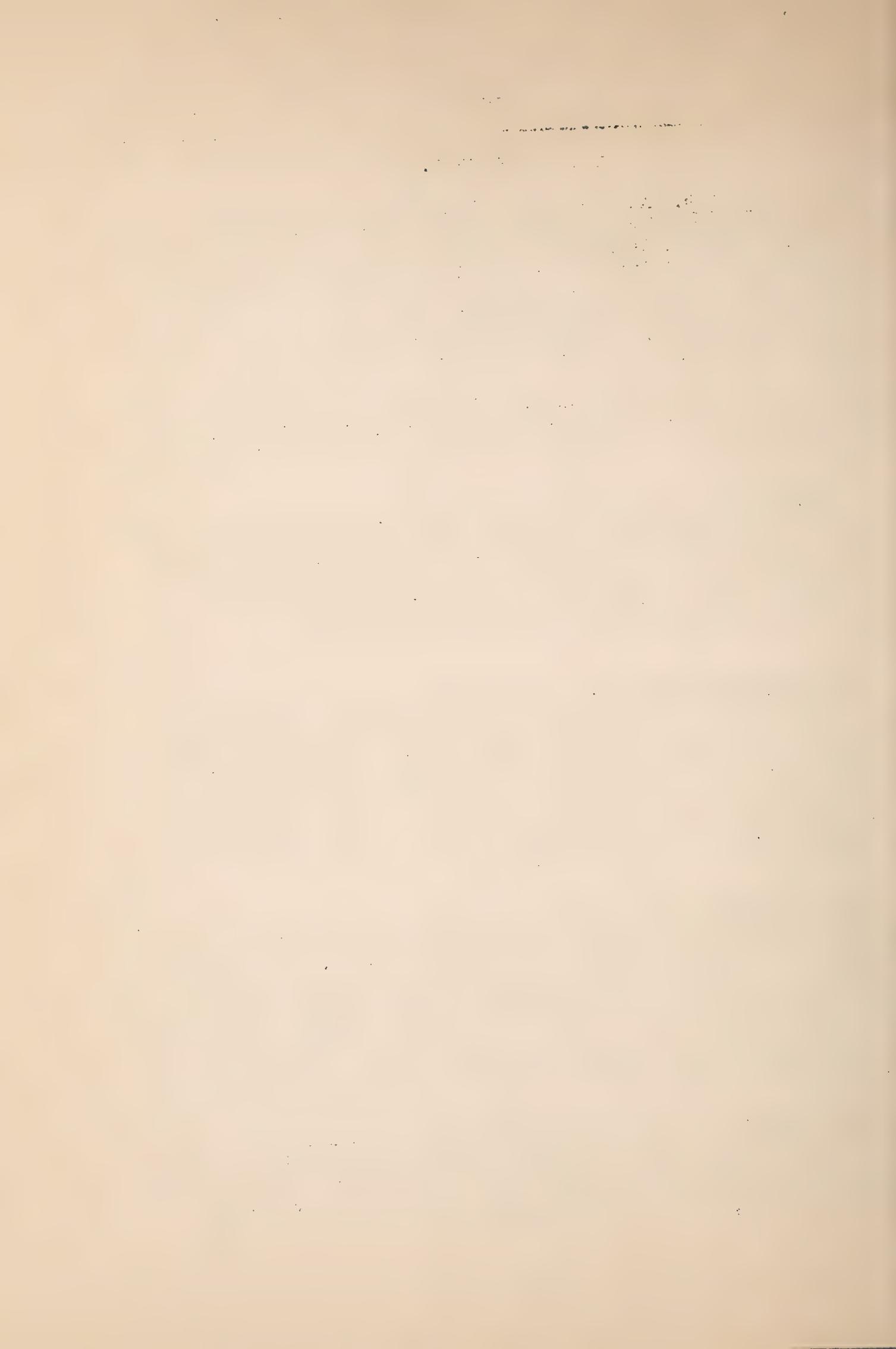
The Gardening Season Opens. The neighbors kept on fairly good terms until gardening started each year, the chickens owned by one playing havoc with the seeds being planted by the other. Finally the gardener shot one of the chickens, and his neighbor came in to complain. "Didn't I tell you not to shoot my rooster?" he demanded. "And didn't I tell you to keep him out of my garden?" responded the other. "He wasn't in your garden," protested the rooster's owner. "He just had his neck through that crack in the fence." The gardener nodded "Well," he said, firmly, "that was all I shot--his neck."

That's Reforming 'em! - A small boy had acquired a habit of swearing. For this reason he became unpopular with mothers of other children and was often sent home from youthful gatherings in disgrace. He returned one evening half an hour after he had set out for a party, and his father assuming the usual cause, asked no questions but chastised him with vigor.

"And now," he said, finally, "what was it you said? Why did they send you home this time?"

"They sent me home," replied the smarting child, "because the damn party's tomorrow night."

Under the Sod! In one of his daily columns, O. O. McIntyre writes that he has received a circular letter reading, "We are sending you an illustrated book that will make you want to go to a place where you have long been overdue." And he comments: "I hope it doesn't turn out to be a seed catalogue!"



PERSONAL MENTION

DR. AUCHTER recently returned from inspecting the Central Great Plains Horticultural Station at Cheyenne, and the Potato Experimental Station at Greeley, Colorado. The Cheyenne Station consists of 2,105 acres of land. Plans are being made to irrigate about 300 acres.

WALTER T. SWINGLE is expected in Washington shortly after April 15, to confer with officials in connection with future work, and to arrange for shipment of a special collection of citrus plants and relatives to the receiving greenhouse at Torrey Pines, California. Dr. Swingle is coming to Washington by way of Alabama and will spend a day or two at Silverhill taking notes on the progress of experimental work there in connection with tests of strains of the Satsuma orange, citrus stock plants, etc.

CHARLES DEARING and DAVID GRIFFITHS are authors of "Daffodils in Eastern North Carolina," recently issued by the North Carolina State Department of Agriculture, and reporting the results of cooperative bulb investigations carried on by this office and the North Carolina station in cooperation. Dr. Griffiths is also the author of "The Production of Lily Bulbs," just issued as U. S. Department Circular No. 102.

The pathologists of the office and other workers interested in pathological progress in connection with horticultural crops in particular, will find the PLANT DISEASE REPORTER issued by the Office of Mycology and Disease Survey, Bureau of Plant Industry, valuable. It is sent regularly to those who apply for it, who show that they need it in their professional work, or who can assist by supplying authentic information. Members of the staff of this office are frequent contributors to its columns.

C. S. POMEROY gave a talk before one of the series of weekly extension meetings sponsored by the San Bernardino Valley Junior College at Junior College, San Bernardino, California, describing the work on citrus bud variation and selection. He illustrated the talk with lantern slides.

T. RALPH ROBINSON left April 4 for Indio, California. After a short stay at Indio, inspecting the date work, he will visit various parts of California and possibly Arizona in connection with a study of the pollination problems of the avocado.

Employees of the office are well represented in the March 1 issue of the JOURNAL OF AGRICULTURAL RESEARCH, WALDO having papers on fruit-bud development in strawberry varieties and species, and on fruit-bud formation in Everbearing strawberries; while DRECHSLER discusses leaf spot and foot rot of Kentucky bluegrass caused by Helminthosporium vagans. DRECHSLER also contributes to the March 15 issue a paper on "Repetitional Diplanetism in the Genus Phytophthora."



P. M. LOMBARD has returned to Presque Isle, Maine, after extended work in Florida and the Gulf States. He reports that when he left St. Augustine, Florida, for Houma, La. March 15, he found the potatoes in the Hastings section making some recovery from the severe frost of early March, though the percentage of potatoes planted early enough to be harvested then was small. The bulk of the acreage in the Hastings area was planted after January 15, and was set back three weeks or more by the severe frost of March 3-4. He came to Washington on March 24, and left for Presque Isle, Maine, March 31, arriving there April 3. He reports that it is still cold there with plenty of snow in the fields and woods, with conditions on Aroostook Farm about as usual for this time of year. The potato market had been advancing, four dollars per barrel, bulk, being paid April 3.

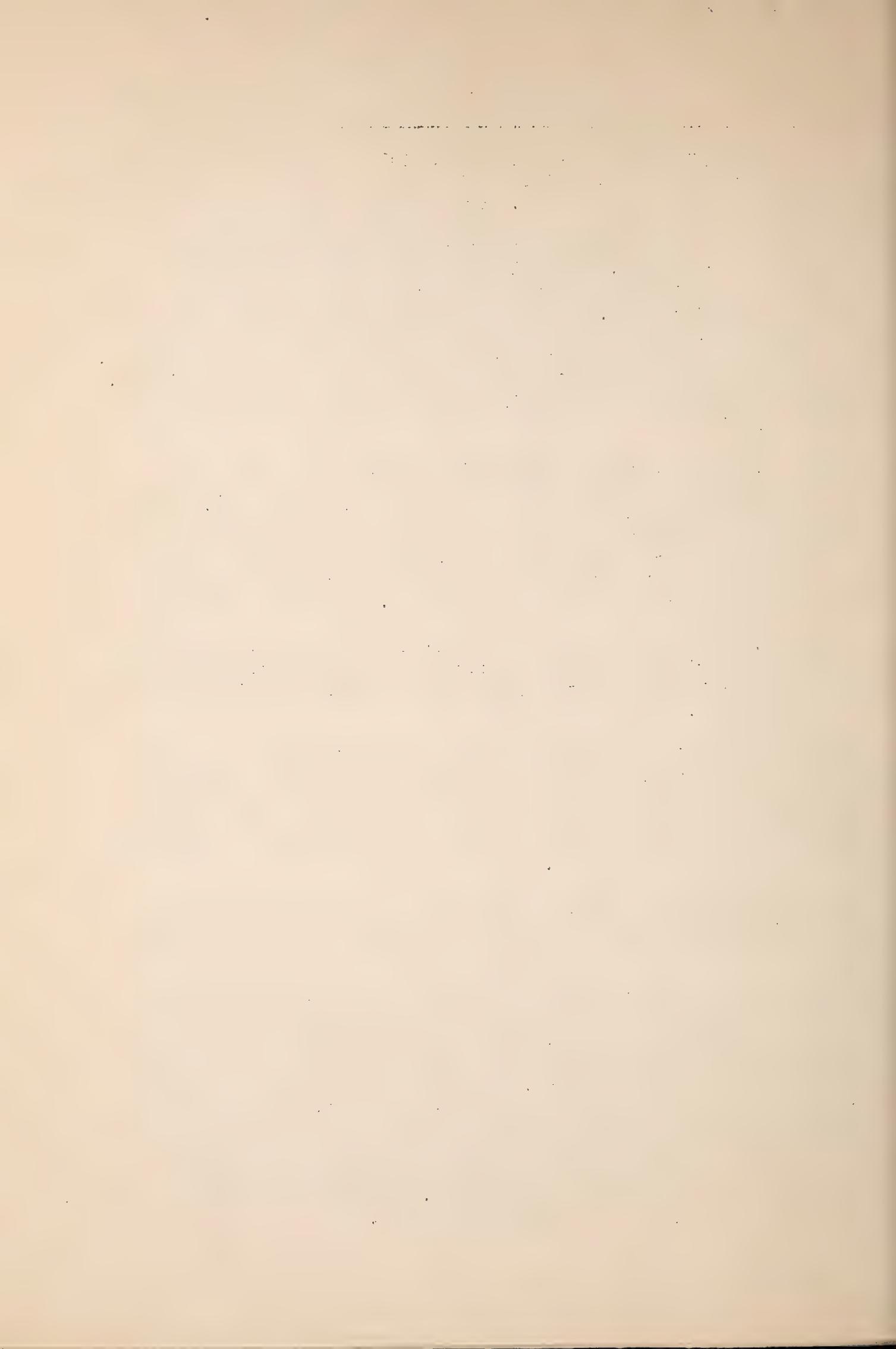
FRED L. HUSMANN, superintendent, Napa, California, under date of March 18, reports the vines starting into growth in the U. S. Department of Agriculture Experiment Vineyard at Oakville, California. Under date of April 1, he mentions that the first plowing in vineyards in the counties around or near San Francisco Bay was well under way and that they were busy putting in the grape nursery in the Department of Agriculture Experimental Vineyard at Oakville, California.

GEO. C. HUSMANN reports that the replantings and additional plantings of grape varieties and the trellising and dormant spraying of vines in the Varietal Vineyard on the Arlington Farm, Rosslyn, Virginia, have been accomplished.

H. C. DIEHL will visit points in Oregon and California early in April to confer with investigators and commercial interests regarding spray residue removal equipment. He plans to attend the meeting of the Pacific States Cold Storage Warehousemen's Association at Del Monte, California, April 20-21, delivering an informal address on the refrigeration of fruits and vegetables.

MARY K. BRYAN left Washington April 13 for a three weeks trip to Georgia, Florida and South Carolina, for experimental and observational work on bacterial canker of tomatoes.

MARTIN BILON reports extensive work at the Bell, Maryland, station in top-grafting chestnuts to varieties sent in from Japan and to hybrids, the healing process being slow, though it is hoped that by covering the graft wounds and scions with paper bags after the tying and waxing is completed, healing will be aided. Over 400 pear scions were grafted during 1929 without one needing artificial supports. There will be, he estimates, 1500-1800 hybrid rose seedlings this season, the largest number yet secured. He attributes this success to mass hybridization with pollen parents from Arlington and a proper germination space in the Foreign Plant Introduction dugout greenhouse. "A genetic course given by the Department of Agriculture helped," he adds.



The cause of brown blight has not yet been definitely determined. It is a soil borne disease which may occasionally cause some injury in soil where lettuce is being grown for the first time. It, however, usually causes trouble only where a second, third or later crop of lettuce is grown in the same soil. Where a lettuce crop shows any appreciable amount of disease, another crop on the same soil is certain to show greatly increased disease. In spite of the fact that brown blight seems to attack only lettuce, rotation of crops has little or no value in combatting it.

In the hope of finding resistance to brown blight, some 100 varieties of lettuce from many parts of the world were grown in severely diseased soil in the Imperial Valley in 1923. Two varieties, Big Boston and White Chavigne, were entirely immune, but these varieties are of no commercial use in California and Arizona. Crosses had been made in 1922 between White Chavigne and the New York variety, grown almost exclusively in the Pacific Coast and Rocky Mountain lettuce sections. Breeding and selecting of these crosses are now, after seven years and five to ten generations of lettuce, beginning to give strains which combine the resistance of the White Chavigne with the type of the New York, but these new strains are not yet in commercial use.

The development of resistant strains from crosses or hybrids was known to be a slow and laborous procedure. Consequently the generally much shorter process was undertaken of finding in the fields of the standard variety resistant single plants from which to breed up resistant strains or varieties. In 1923, many diseased fields of the New York variety were searched, but it was not until the following year that a single badly diseased field of the variety was found containing occasional normal healthy plants entirely surrounded by diseased plants, and giving every indication of withstanding the disease which was destroying neighboring plants. Many of these apparently resistant plants were "sports" and "off types," indicating that their resistance may have originated from natural chance crosses between the New York and some resistant variety several generation previously. Some of them were very similar to the New York. About 125 of these most promising plants were selected and seed grown and harvested from each plant. One or more breeding plats, consisting of 25 feet of double row each, were planted with seed from each of the 125 selected plants on badly diseased soil in 1925. Some of these breeding plats showed no healthy plants, of course, and many only part healthy plants, but several plats showed PRACTICALLY NO DISEASED PLANTS, and made good marketable heads of the New York type in spite of the severely diseased soil in which they grew. Larger and larger plantings were made of the most promising strains during the next few years and by 1926 three strains--under the names Imperial Nos. 1, 2 and 3--were being given comprehensive test which resulted in rejecting No. 1. Nos. 2 and 3 gave good commercial crops, practically free from brown blight, and stock seed of these was placed in the hands of seed growers and has been on sale by seedsmen since.

About 27,000 of the 38,000 acres of lettuce grown in the Imperial Valley during 1930, was of the Imperial Nos. 2, 3 and 6 varieties originated by JAGGER. Imperial No. 6 was secured as the result of the selecting and breeding of the 125 selections made in 1924. The value of the lettuce on these 27,000 acres has been estimated at from eight to ten million dollars in California; and from fifteen to twenty million in the eastern markets.

An interesting feature of the work has been JAGGER'S demonstration of the feasibility of burning the candle at both ends, so to speak. The lettuce work is carried on with headquarters and experimental garden at Chula Vista, California, which enjoys a mild equable coastal climate. Many of the field trials are made in the extensive lettuce fields of Imperial Valley which lies 125 miles inland from Chula Vista and has decidedly more sunshine, lower humidity, and higher temperatures. Lettuce is planted during September and October and harvested throughout the colder part of the winter in Imperial Valley, where the early warm springs make it possible to obtain mature seed from breeding and trial plats in May. This seed on harvesting is planted immediately under the comparatively cool climatic conditions at Chula Vista, and seed of the summer generation harvested there in September in time to plant back in Imperial Valley for the winter generation. This unique situation of two climatic conditions, favorable for winter and summer crops of lettuce and lettuce seed, only 125 miles apart, has made possible two generations a year and double speed in breeding new strains of lettuce. It is essential to make extensive field trials in Imperial Valley, but most of the breeding work for mildew resistance must be done at Chula Vista where the disease always occurs, since mildew occurs only occasionally under the conditions of low humidity and much sunshine in Imperial Valley. This situation has led to the development of what may be termed double-resistant strains--strains of the New York variety type which are resistant to both brown blight and mildew.

Since 1927, NORMAN CHANDLER, assistant scientific aid, has been helping JAGGER with this lettuce work, and the investigations in general have been carried on with the aid of various assistants and numerous co-operators. DR. JAGGER gives special credit to the staffs of the Horticultural Commissioner's and Farm Advisor's offices of Imperial County, California, for cooperation and assistance throughout the work, and to similar officials in other counties with the extension of the work to other sections the past season. The breeding has been possible only through the extensive cooperation of numerous lettuce growers in supplying land, labor and equipment for growing trial plats on a large scale. These cooperators handled during the recent season 4,000 breeding plats, covering 8 acres; and 100 larger trial plats, covering 20 acres, in the Imperial Valley of California. In the Casa Grande, Arizona, section, 1,000 plats covering 5 acres were handled, together with 500 plats covering 2 acres in the Salinas, California, section; and 250 plats covering 1 acre in the Santa Maria, California, section.

MEMORANDUM FOR MEMBERS OF THE STAFF.--The prompt and expeditious handling of all matters requiring administrative action in the office is an ideal for which we strive, even though the results may sometimes leave considerable to be desired. As a means of making a closer approach to this objective, Mr. W. W. GILBERT, senior pathologist, for many years in the Vegetable Disease unit, is now assuming certain responsibilities in the administrative activities of the office. One of his immediate activities has to do with the administrative handling of manuscripts submitted for publication either by the Department or in outside channels, the revision of bulletins and other publication matters that require a technical background for their effective and satisfactory disposal.

As in the past, manuscript will be submitted to project leaders who are here in Washington, or to the Head of the Office, as the case may be, as I am always interested and desirous of being fully informed in regard to the progression of the publications phase of the office work, but it will be Mr. Gilbert who will largely act for me in seeing to it that manuscripts are reviewed by those whose work they may touch or parallel; he will himself review critically many of the manuscripts to see that the author, in his familiarity with his subject, has not omitted by oversight, important details necessary to make his meaning clear, or perhaps has failed sometimes to express himself clearly on points that would escape the eye of an editor who might be paying attention more particularly to grammatical construction and composition than to technical interpretation. In fact, it will be for Mr. Gilbert to see to it that a manuscript is as nearly perfect and as nearly invulnerable as it can be made when it is formally submitted to the Chief of Bureau for his consideration. In connection with his duties, Mr. Gilbert will have occasion from time to time to confer with the workers here in Washington and to write to the men in the field about various administrative matters. This memorandum will serve as his introduction to you in this capacity.

April 16, 1930

E. C. AUCHTER,
Principal Horticulturist in Charge.

ADMINISTRATIVE SPECIAL! It is a pleasure to note the response being made to our request that holders of letters of authorization keep a careful record of all vouchers sent in for payment under their authorizations--and when additional funds are required to request the increase at least 10 days in advance, on the special blanks provided for that purpose. If YOU have not already given careful consideration to the instructions on this point (NEWS LETTER, April 15, 1930, page 74) please read those instruction carefully and take such steps as are necessary to avoid sending vouchers to this office which would overdraw your letter of authorization. **HEREAFTER VOUCHERS SENT TO THIS OFFICE FOR WHICH THERE IS NOT A SUFFICIENT BALANCE, WILL BE RETURNED TO THE SENDER.**

FREEHAND SECTIONING METHOD.

In two articles published in the March 1 number of **THE JOURNAL OF AGRICULTURAL RESEARCH**, and referred to briefly in the last issue of the **NEWS LETTER**, George F. Waldo reports on studies of the fruit buds of the strawberry in which he has used the freehand sectioning method of preparing slides for permanent mounts and for direct observation. This method is especially valuable in studying variable material where time is an essential element in the studies. Hundreds of sections can be made and studied in a day and all except the important ones discarded, while under the paraffin method at least two weeks usually elapses between the time when the material is collected and the slides are ready for study. To study the rate of the fruit-bud development of strawberry varieties, Waldo has taken his razor, slides and microscope to the field just before the first fruit buds were expected to differentiate. Any number of buds can be sectioned to see if fruit-bud differentiation has started, and, if it has, it how many and in what types of buds. Correlation of the stage of development of the fruit buds with appearance of the plants in the field has important practical aspects and is possible with this but very difficult with the paraffin method. For all except the most detailed studies the freehand method has been satisfactory.

**RHEUMATIC?
LOSING YOUR TEETH?
OR YOUR TEMPER?
EAT FRESH FRUIT!**

The food experts of the Department find that on diets deficient, even though not entirely without vitamin C, children become irritable and lacking in stamina. Shortage of vitamin, too, is believed to be an important factor in the prevalence of tooth decay, and of much of the so-called rheumatism. The unfortunate angle of the situation is that the body appears to have only a limited capacity for storing vitamin C. Horticulture offers first aid. Citrus fruits, raw cabbage, turnips and tomatoes are especially good sources of vitamin C. Other fruits and vegetables supplying this important vitamin are apples, bananas, carrots, cauliflower, guavas, onions, peaches, peas, pineapples, potatoes, raspberries, spinach, sprouted legumes and string beans.

EXPRESS CHARGE SLIPS.

A recent Comptroller's decision has made it necessary to discontinue the use of the express charge slips recently sent to our employees for use in connection with express shipments between points in the field **AND REQUIRES THAT ALL SUCH SHIPMENTS MUST IN FUTURE BE MADE UNDER GOVERNMENT BILLS OF LADING.** Accordingly, all charge slips should be returned to this office immediately for cancellation. If you need an additional supply of Government bills of lading, please let Mr. Swartz know at once. Should a shipment arrive without the original bill of lading and delivery be refused, telegraph immediately for instructions as to what procedure should be followed in order to obtain the shipment.

TAKING PART IN RADIO PROGRAMS. "Bureau chiefs recently have told me that they have been at a loss to know what response to make to requests for radio talks to be given in broadcast programs sponsored by commercial concerns," says M. S. Eisenhower, Director of Information, in Office of Information Memorandum No. 5. "It has been intimated that it would be well to have the administrative regulations amended so as to cover this subject.

"After considerable thought, it seems to me that the question is amply dealt with in existing regulations. Naturally, officials of the Department of Agriculture in acting on invitations to deliver radio talks should be guided by the intent of the rules and regulations which cover the issuance of Department information in all forms.

"For instance, paragraph 600 of the administrative regulations declares it to be the policy of the Department not to refer by name to commercial institutions or enterprises, in any of its publications (which now, of course, include official radio addresses) the purpose, as stated, being to avoid the use of the Department as a medium for advertising. Paragraph 604 requires bureau chiefs to approve radio addresses by employees of the bureaus, if the addresses treat only of subjects pertaining to the work of their bureaus. If the material treats in any way of the policies of the Department or the work of other bureaus the address must be submitted to the Office of Information for approval. Again, paragraph 661, subparagraph (f), clearly indicates that employees should not permit the use of their names in the advertising matter of organizations commercializing any of the work conducted by the Department, irrespective of any merits which these enterprises may possess.

"In other words, the employee's first consideration should be whether or not the acceptance of an invitation to take part in a commercially sponsored radio program would in any way officially embarrass the Department. Numerous regulations other than those cited indicate that it is improper for Department employees to endorse or to appear to endorse the products of any commercial concern.

"Radio methods and the entire radio setup are changing rapidly. It would be unwise, I feel, for the Department to make hard and fast rules now which in a short time might become obsolete. If we follow the intent of present regulations on information work, all requests for radio addresses will be handled to the best interests of the Department."

DISTRIBUTION OF THE NEWS LETTER. Project leaders should furnish us with the names and addresses of new employees or any employees entitled to receive the NEWS LETTER who do not now receive it, so that the names may be included on our mailing list. The NEWS LETTER, of course, is issued solely for the information of our employees, and is not for distribution outside our own personnel.

STANDARDIZED Bureau of Plant Industry Memorandum No. 489, of March
HEADINGS FOR 31, 1930, outlines two headings, either of which will be
CIRCULARS, ETC. acceptable and one of which must be used on all mimeo-
graphed and informal circulars and memoranda to be dis-
tributed to the public and where indication of authorship is desirable.

FOUNDATION PLANTINGS

By Furman Lloyd Mulford, Associate Horticulturist, Office
of Horticultural Crops and Diseases, Bureau of
Plant Industry, U. S. Department of
Agriculture.

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Plant Industry

FOUNDATION PLANTINGS

By Furman Lloyd Mulford, Associate Horticulturist, Office
of Horticultural Crops and Diseases.

Dr. Auchter prefers the second form as being more nearly in accor-
dance with the titlepages of our bulletins. Please see, therefore, that
circulars of information prepared for mimeographing and multigraphing for
distribution to the public bear this form of heading in future.

HORTICULTURAL The April issue of FRUITS AND GARDENS contains an an-
CONGRESS MEETS nouncement of the Ninth International Horticultural
IN LONDON. Congress which is to be held in London, August 7-15,
1930. The program will be divided into three main
sections: propagation, pomology, and botanical gardens and general sub-
jects. The preliminary announcement lists about forty lectures to be pre-
sented by authorities from fifteen countries, with one-third of the
lectures by Americans.

In connection with the Congress, there will be a number of excur-
sions to English fruit farms, private gardens, botanical gardens, seed
trial grounds, nurseries and experimental stations; and there will be a
special exhibition by the leading nurserymen of England, featuring new
and rare plants and novelties of recent introduction.

EDITORIALLY SPEAKING.

AUTOMOBILE
LIABILITY
INSURANCE. For some time administrative officers have been giving consideration to liability insurance for drivers of Government cars. In most States there is legislation which makes an employer in industry liable for the acts of his employees. The Government carries no such responsibility and liability for damages falls on the employee himself. Where negligence on the part of an employee is admitted, the Secretary can adjudicate property damages where the sum does not exceed \$1,000.00. The serious risks, however, as carried by the individual are not to property but injuries to individuals. Personal injury damage suits frequently involve large sums. The Compensation Act merely protects workers injured in performing official duties. It gives no protection where the injury is to someone else; and the laws of the various States making industrial concerns liable do not apply to the United States Government, but only to private employers.

It is highly desirable that employees using official cars, Government owned or rented, should protect themselves, as in case of accident the driver alone can be held responsible. Where a car is operated on a field station, merely occasionally, or where light traffic obtains such protection may not be justified. Those supervising employees should exercise judgment in such cases. As a general rule, no one should be employed for work which involves extensive operation of an automobile unless he agrees to protect himself by insurance. An employee who does not protect himself should be assigned to work which will not involve driving an automobile. If it were possible for the Government to pay premiums on such insurance, it would undoubtedly be made a part of the regulations that all employees operating Government automobiles should carry liability insurance. But the Government cannot, as a matter of law, pay such fees. For this reason we can only urge the desirability of adequate protection by employees. It may be possible in cases where an employee carries liability insurance on his personally-owned car to have his policy extended to cover any automobile he may drive, thus avoiding the necessity of a special policy to cover the Government car alone.

In some States policies may be secured to cover the car rather than the individual--that is, to cover any employee who may be operating it--and the premium divided. The workers on barberry eradication in Wisconsin secured through Reitan-Lerdahl & Company of Madison, Wisconsin, a policy that covered cars, whether rented or owned by the Government, instead of the individual using the car, the rate being \$18.00 for 12 months with policies issued for fractional parts of years where cars were not used continuously. In cases of this sort (the insurance was placed by Reitan-Lerdahl with the Lumbermans' Mutual Casualty Company of Chicago) the premium could be pro-rated among the men using the car.

The Bureau, of course, is not interested in any particular policy; any policy that protects the worker will be satisfactory. And efforts are still being continued to find some fair solution of the problem. The fact we have to bear in mind is that the Government is NOT liable for personal injuries to outsiders.

 IN A LIGHTER VEIN.

AN EXPENSIVE DEMONSTRATION! Noticing in a radio manuscript the other morning the story of the two Scotchmen who were walking along the street together one morning when one stooped and picked up a dollar from the sidewalk, whereupon the other immediately hurried off to see an oculist, Dr. Taylor was reminded of a story told him recently by--well, by one of the Secretary's immediate assistants. It appears that when this assistant was a student at the University of Nebraska, he went on a collecting trip to Cheyenne with a professor. Strolling about the town, a typically "wild west" settlement in those days, they saw a "bad man" leaning against a saloon door, guns and equipment complete, apparently almost asleep. The assistant, being something of a sleight-of-hand artist, thought to have a little fun with the bad man and, borrowing a silver dollar from the professor, appeared to pick it from the walk at the bad man's feet. Immediately the latter roused himself up and said, grimly, "Bo, that's my dollar!" After a fleeting glance at the guns strapped to the bad man's side, the assistant decided that the professor would have to lose his dollar!

Oh, the farmhands chase the coy cow,
They give her tail a pull.
But they don't annoy the boy cow--
For that would be a bull!

THE MYSTERY EXPLAINED! A darkey who had grown tired of work on the farm decided to try his hand at selling insurance. He had been making the rounds for a week or so when he knocked at a door and inquired of the man who answered if he would be interested in insurance. The man announced that he was the State Insurance Inspector and demanded to see the darkey's license. The latter admitted that he had no license. "Don't you know you can't sell insurance without a license?" demanded the inspector.

"I know I can't sell insurance," agreed the darkey, "but I didn't know the reason heretofore'."

HORTICULTURAL PUBLICITY. Sometime ago one of the California papers carried an article headed "RECORD ALMOND CROP." This was well enough except that through error the heading had been placed over an account of the overcrowding of one of the State's homes for the insane. It gave the paragraphers an excellent chance for playing on the word "nuts".

And the Washington newspapers headed a radio program: FRUITS AND VEGETABLES TALK OVER RADIO THIS EVENING. Of course, our plant breeders do accomplish miracles, but this appears to be expecting too much of horticultural products!

"The quickest way to acquire a large vocabular," declares Uncle Sammy, "is to marry one."

PERSONAL MENTION.

VICTOR H. BOSWELL is visiting points in Texas, conferring with officials of the Texas Agricultural Experiment Station regarding cooperative work in the State on standards and descriptions of American varieties of vegetables. He will inspect the variety type plantings at the Texas substations.

Incidentally, Dr. Boswell has revised Farmers' Bulletin No. 1255, Production of Peas for Canning, by Chester J. Hunn. Peas rank among the three most important canned vegetables of the country and because of their leguminous nature canning peas fit admirably into a general farm rotation and have a marked influence in increasing the yield of crops which follow them.

P. M. LOMBARD writes from Presque Isle, Maine, that after some spring-like weather it turned cold about April 15, and continued so for several days. "The potato market," he writes, "has held up strongly since early April, prices ranging from \$3.75 to \$4.10 per barrel. The potato storage houses are pretty well cleaned out, the bulk of the remaining five to six thousand cars being in the hands of the growers. Our work on Arcostook Farm is well advanced compared with previous years, all stock has been treated, orders filled and seed stock for experimental plots selected for planting. We are cutting seed stock for the increase plot with a sterilized knife."

J. R. WINSTON is visiting points in the orange growing sections of Florida in connection with his investigations on the coloring of citrus fruits.

EUGENE S. SCHULTZ came to Washington late in April for a conference with official concerning work for the remainder of the fiscal year. He had been at Yonkers, New York, and is returning to his permanent station at Presque Isle, Maine.

F. L. MULFORD attended the April meeting of the Garden Club of Frederick, Maryland, and gave an informal talk on herbaceous perennials.

FREEMAN WEISS made a short trip to Babylon, New York to inspect field experiments on narcissus disease control.

J. H. BEATTIE is the author of "Growing Cucumbers for Pickling," issued as Farmers' Bulletin No. 1620. Cucumbers for pickling, he points out, occupy approximately 75,000 acres each season in the United States, and the yield has a value of three million dollars or more annually, so that this is a cash crop well worth attention.

E. C. ASBURY, H. C. DIEHL and W. T. PENTZER attended the meetings of the Northern Division of the California Cold Storage and Ice Mfgs. Assn. and the Pacific State Cold Storage Warehousemen's Assn. at Del Monte, Calif. April 16-19. PENTZER had an opportunity to discuss the handling and storage investigations of table grapes, paving the way for work on those problems most important from the practical cold storage man's point of view. DIEHL discussed frozen pack of fruits and vegetables.

WALTER T. SWINGLE gave a paper before the annual meeting of the National Academy of Sciences at Washington, D. C. April 28, discussing the remarkable parasitic plant *Amnobraea sonorae*, Torr., native to the sandhills of southeastern California and northwestern Sonora. This flowering plant is so rare that until recent years only four or five collections are known to have been made since its discovery in 1854! It belongs to a very rare plant family, Lennoaceae, which includes in all only four species, all native to California and Mexico. The fleshy stems of this plant are 3 to 4 feet long and from 3/4 to 1-1/2 inches in diameter, buried in the sand. They are eaten by the Indians and also considered excellent eating by white Americans who have had a chance to test them well roasted over a bed of coals. This crop is produced in sandhills with very little rain. Two or three inches of rain falling early in winter suffice to produce a large crop of *Amnobraea* the following spring.

GEO. C. HUSMANN is author of Technical Bulletin 146, "The Testing of Phylloxera Resistant Grape Stocks in the Vinifera Regions of the United States," reporting the results of the Department's grape investigations in vinifera regions of this country with such stocks. Dr. Husmann reports, also, that the first plowing under way in the Department varietal vineyard at Arlington Farm, and the earlier grape varieties there just starting.

FRED L. HUSMANN, superintendent, Napa, California, reported under date of April 6 that the first plowing and discing with cross-cultivation had been finished in the U. S. Experimental Vineyard at Oakville, Calif. Under date of April 12, he mentions vines in the same vineyard as growing rapidly, the second plowing and crown suckering of vines under way, and the Department's 1930 grape nursery planted.

The raisin exhibit announced in the NEWS LETTER of April 15, and staged in Room 420, 220 14th street, Southwest, of 25 varieties of dual purpose grapes of exceptionally high quality, proved a decided success, to judge from the expressions of the many persons interested in grapes who came to see it.

FLORENCE HEDGES returned April 18 from a trip to Beaufort, S. C. where she is carrying on some experiments on bean halo blight. This disease is showing up quite extensively in some of the fields in the neighborhood of Beaufort and Charleston.

THE OFFICE OF HORTICULTURAL CROPS AND DISEASES

SEMI MONTHLY NEWS LETTER.

The Official Organ of the Office of Horticultural Crops and Diseases,
Bureau of Plant Industry, United States Department of Agriculture.

John A. Ferrall, Editor

This NEWS LETTER is for distribution only to employees of the Office and the material in it is of an informal and confidential nature and is not to be published without the prior approval of the Office of Horticultural Crops and Diseases.

Vol. II

Washington, D. C., May 15, 1930

No. 10

THIS PLANT IS "A plant with flowers but no leaves, that gets most
A PRONOUNCED of its food by sapping the roots of other plants, and
"DRY". grows to be ten or twenty times as heavy as its host,
yet without causing the latter any apparent injury, was
described before the National Academy of Sciences at its meetings at
Washington, D. C. by WALTER T. SWINGLE," says a news bulletin of the
Science Service. "It has the further distinction of being good food
for human beings and of maturing a crop on as little as three inches
of rain a year--believed to be a record for food plants in dry regions.

"It was originally discovered about eighty years ago, in the
desert near the California-Mexican border, but until over a year ago
remained a great rarity. Now, however, it has been rediscovered in
great abundance, and has received its first botanical study.

"The part of the plant used for food is the thick, fleshy stem,
in which the plant stores water and a reserve of food material. The
original discoverers found the Papago Indians using it for food, and
when they tried it roasted over a fire they found it very good. Dr.
SWINGLE suggested that inasmuch as no other useful plant can be in-
duced to grow in this arid region, it might be worth the white man's
time to follow the lead of the Indian on a larger scale."

This, of course, is Dr. SWINGLE'S paper on Artemisia sonorae,
Torr., referred to briefly under "Personal Mention" in the NEWS LETTER
for May 1. The plant, one of the most interesting ever found in the
New World, was discovered on May 17, 1854, by Andrew B. Gray, a sur-
veyor and member of the United States Mexican Boundary Commission. He
found it growing in the sandhills midway between Pinecate Mountains

and Adair Bay in extreme northwestern Sonora and saw Papago Indians digging up and eating the buried stems. He and his party found the *Ammobroma* delicious when roasted over hot coals. In 1864, John Torrey described the plant as *Ammobroma sonorae* (sand food). Its native Indian name is *hiatatk* (*hia*, sand, sand-dune; *tatk*, root), the Indians calling it "root of the sands." *Ammobroma* is a new species and a new genus belonging to a new natural family, *Lennoaceae*, which includes besides *Ammobroma* two species of *Lennoa* from Mexico, and one species of *Pholisma* from California.

It has been so rare that only four or five collections are known to have been made of it in the first seventy-five years after it was discovered, and many of the great botanical museums of the world have no specimens of it. So far as known, it occurs only in two long ranges of sandhills extending from northwest to southwest on the east side of the Colorado desert; one of these ranges in California, the other in Sonora.

In the spring of 1928, FRANK A. THACKERY and M. FRENCH GILMAN, associates of Dr. SWINGLE, found abundant material of *Ammobroma* along the recently paved highway between Holtville, California and Yuma, Arizona, and secured extensive notes and photographs for the report they have prepared for publication on this plant. One of the surprising things discovered by them is that the colony of *Ammobroma* plants growing attached to the roots of *Coldenia* plants greatly exceed the host in weight, probably weighing ten or even twenty times as much! The host plant, however, appears to be little if at all injured by this parasite.

The *Ammobroma* is an important food resource of one clan of the Papago Indians, who, as stated call it "sand-root" or "root of the sands." In favorable seasons these Indians formerly gathered tons of the vegetable to be consumed in fresh or dried state. The fact that they learned to dry it, makes it appear that *Ammobroma* could be canned like asparagus, and its economic utilization should be given serious consideration.

The fact that *Ammobroma* is an important and imperfectly utilized food resource of the Papago Indians makes it of especial interest to the crop physiology and breeding unit of the office, in charge of Dr. SWINGLE, which has for some years past had an active project financed in cooperation with the Office of Indian Affairs of the Department of the Interior, to develop new food resources for these Indians in time of famines. FRANK A. THACKERY has had immediate charge of this work, under Dr. SWINGLE'S direction, and has already published (with Mr. A. R. LEDING, formerly connected with the office) a very interesting paper on the food value of the giant cactus. (The Giant Cactus of Arizona, in *JOURNAL OF HEREDITY*, September, 1929.)

BIDS FOR GASOLINE. Bureau of Plant Industry Memorandum No. 495, dated April 14, 1930, states "In connection with specifications issued to obtain bids for the procurement of gasoline, we have been requested by the Director of Purchase and Sales to use the following in all such specifications:

'Dealers (distributors) required by law to pay a State tax on gasoline must not quote this tax as a part of the sale price, but must quote a net price and state affirmatively that no such tax is included in the price quoted.'

"This will replace the instructions to bidders which have been in use for some time and read as follows:

'Since the collection from dealers of a State tax on gasoline sold to the United States is declared illegal . . . the price quoted must not directly or indirectly include any State tax.'

"All such specifications should also include the approximate quantity of gasoline that will be purchased over a given period in order that the bidder may obtain some idea as to the amount that will be purchased. Our attention has been called to this point due to the fact that some specifications have called for bids on the minimum quantity only to be used during a given period, whereas the specifications should read, for example:

'50 to 75 barrels to be supplied during the period April 1st to June 30th, 1930.'

"A third point to be observed in such specifications is to put in a paragraph so that the Government will benefit by any decrease in price during the term of the contract. The following paragraph will take care of that.

'In the event of reduction of vendor's retail price during the term of the agreement, the vendee shall receive a reduction in the same amount per gallon from the price bid. At no time during the term of the agreement shall the vendor's price exceed the prices bid.'

THE PEANUT AS A BRAIN FOOD. Reference to the matter of laying in a supply of gasoline, naturally reminds one of a recent assertion by Dr. Francis G. Benedict, director of the Boston nutrition laboratory of the Carnegie Institution, in connection with the no-longer-humble peanut. Speaking of the annual meeting of the National Academy of Sciences at Washington in April, the doctor declared that one-half of a salted peanut has been found food enough to provide the extra calories needed for an hour of intense mental effort!

PURCHASING
REPORTS OF
CONFERENCES.

Circular Letter No. 21 from the Office of the Chief Coordinator, calls attention to some questionable practices by reporting companies in connection with the furnishing of reports of meetings; etc.

"1. It has been brought to the attention of this office by the Interdepartmental Board on Simplified Office Procedure that some of the departments and establishments have made contracts with reporting companies for recording conferences in the development of projects which are not to be published as official documents.

"2. It appears that the reporting companies usually take the conference and deliver, without cost to the department or establishment sponsoring such conference, three copies of the stenographic report of the proceedings in return for the privilege of selling mimeograph copies of the same report to the members of the conference or to the public at large.

"3. During a recent conference held such a reporting company distributed order blanks among the delegates covering an order for the purchase of the complete report at 25¢ a page. The company could not at that time, of course, state the final cost inasmuch as there was no way to determine how long the report would be. A number of those who attended the conference, and others who were not able to attend, filled out the order blanks without inquiring as to the length of the completed report and its final cost, with the result that a voluminous mimeographed report was delivered on the orders received accompanied by a bill for \$480. The result of such practice is disagreeable, causes friction, and misunderstanding.

"4. It is recommended that the heads of departments and establishments issue the necessary instructions that order blanks distributed by reporting companies plainly show the cost to the public per page, or folio, and contain a provision that the order is to be placed subject to confirmation by the purchaser after he has been advised of the total cost. It is further recommended that the reporting companies be required to furnish the departments and establishments, prior to taking the conference, with a copy of all order blanks, forms, circulars, or letters which the reporting companies propose to use for this purpose.

"5. If the report is to be printed at the Government Printing Office and placed on sale by the Superintendent of Documents, it is recommended that information to this effect be made public at the hearings."

Apparently none of our employees have been victimized by such agreements, but it is believed to be just as well to print this warning as a safeguard.

EDITORIALLY SPEAKING.

John A. Ferrall

ONIONS
GAINING
STRENGTH!

Yes, the onion appears to be gaining strength. W. R. BEATTIE, author of a revision of Farmers' Bulletin, "Onion Culture" (originally issued April 26, 1909) calls attention to the fact that the onion in one or more of its several forms has been used horticulturally throughout all time of which we have authentic history. In this country it is now grown universally in home gardens and is one of our most important market-garden and truck crops, being adapted for growing on a wide range of soil types and under varying climatic conditions, though it requires a rich soil and plenty of moisture.

"The onion is of Old World origin," says the bulletin, "and has been used as a food plant from the earliest historic times." It was an important article of diet in Egypt at the time of the building of the pyramids, which may offer a solution of the problem as to how the large stones were handled. Moses, in his account of the exodus of the Children of Israel from Egypt, mentions it as one of the articles of food for which the Israelites longed during their sojourn in the wilderness. It has, too, acquired a considerable amount of fame by its efficiency in bringing to perfection the national dish of Irishmen--outside of Ireland, that is--the Irish stew.

The onion was brought along to North America by the early settlers and soon became one of the prominent plants in the early colonial gardens though its extensive commercial culture is a development of the past half-century or so. The commercial birth of the onion was in New England but the industry soon spread to other sections and when the vast muck areas of the Great Lakes and other regions were drained and brought under cultivation the onion became one of the most important horticultural crops on these soils.

The onion is interesting from another angle--from, one might say, the horticultural offensive. Even those most familiar with horticultural crops are apt to think of plants as rather helpless and defenseless creatures--differing widely from the animals in this respect. There are admitted exceptions, of course, and most of us have learned through experience that the grapefruit, for example, can fight back rather vigorously when attacked--the evidence has struck us full in the eye, so to speak. The onion takes rank along with the grapefruit, and has the added power of bringing tears to our eyes.

It seems, however, that in addition to its ability to defend itself against human attacks, the onion has its own peculiar defensive weapons against other enemies. The POPULAR SCIENCE MONTHLY sometime ago discussed the fact that red and yellow onions make their own antitoxin to kill parasitic fungi that try to live at their expense. It seems that white onions, however, lack this fighting instinct and so fall prey to fungus attacks. Laboratory studies at the University of Wisconsin, it is said, show that the red and yellow onions contain an acid belonging to the phenol series, which stops the growth of parasitic plants.

IN A LIGHTER VEIN.

BREAKING
THE NEWS
GENTLY!

In spite of a natural reluctance, farmer MacTavish had been coaxed into playing with the village sports in a few games of kelly pool. Since he won rather steadily, he grew to be quite fond of the game and went into town almost every evening. Rather late one night two men drove up to the MacTavish farm and aroused his wife. "You know that Sandy plays kelly pool in the village almost every night at five cents a game?" said one of the men. "And it's quite well I know that," said the wife, in no good humor. "Well," continued the man, "Sandy allowed himself to be coaxed into playing for higher stakes tonight--he was winning at the time--and lost \$1500.00." His wife held up her hand. "Don't tell me that," she said. "If MacTavish ever lost \$1500.00 he would drop dead." The man nodded. "He did," he replied. "That's what we came to tell you."

AUTO LIABILITY INSURANCE?

Grandpa in his motor car,
Pushed the lever back too far.
Twinkle, twinkle, little star.
(Music by the G. A. R.)

GCIN'
FISHIN'?

The boy who had left the farm for the city, remained there to win a fair business success, but never lost his love for the country--especially the opportunities it offered for fishing. So, as usual, as the weather warmed up a little he slipped away for a trip. For years and year and years--no, let's start again: for weary hours he sat watching his float. It never moved save when a ripple of the river made it tremble and raised false hopes in his heart. Then, with the snort of an enraged bull and a foot-tread to match, the village constable came into view. "Fishin' ain't allowed in this pond," he said. "Beat it!"

"I'm not fishing," said the angler, wearily, and trying to be sarcastic. "I'm teaching this worm to swim."

"Ah," said the constable, triumphantly. "Then come along with me. Bathin' ain't allowed in this pond without costumes, and he ain't got one on."

COOPERATION

So live that when thy summons comes to join
The State association, or the town's,
You come across, not only with the coin
To help the business through its ups and downs,
But take a-hand and lend a helping hand,
Enthuse the rest, and so yourself enthuse,
For here's what every man should understand--
Cooperation's more than paying dues.

--Florida Grower

PERSONAL MENTION.

H. P. GOULD is the author of an interesting historical sketch, "Apple Industry of Japan Founded on American Varieties, in the Department's YEARBOOK OF AGRICULTURE, 1930. Mr. Gould recalls the fact that in 1870, General Horace Capron, then Commissioner of the U. S. Department of Agriculture, resigned his position to go to Japan to help with the agricultural development of that country. At the very beginning of this work, there was sent to Japan through one of the New York nurseries 75 varieties of apples, 53 of pears, 25 of cherries, 14 of plums, 30 of grapes, 14 of raspberries, 5 of blackberries, 8 of gooseberries, 10 of currants, and several varieties of apricots and peaches.

The same issue of the YEARBOOK contains F. L. MULFORD'S paper on everblooming roses--"Roses of Everblooming Habit Available for Most Requirements,"--and "Strawberry Called the Blakemore is a Good Dual-Purpose Variety," by GEO. M. DARROW AND GEO. F. WALDO. Since it is estimated that more than 110,000 barrels of strawberries, or the equivalent of nearly 5,000 cars of fresh berries, were frozen in 1928, chiefly for preserving and ice-cream industries, it may be sensed just what it means to growers to have a fruit such as the Blakemore--combining exceptional market and preserving qualities, enabling them to find more than one outlet for their crop.

VICTOR H. BOSWELL has extended his trip South to take in Baton Rouge, La.; Auburn, Alabama; and Willard, N. C., in order that he may have a chance to inspect field experiments at those points and in their vicinity.

JOHN R. WINSTON came to Washington from Orlando, Florida, for a conference with project leaders and officials concerning work for the remainder of the year.

J. C. WALKER contributes to the JOURNAL OF AGRICULTURAL RESEARCH for April 15, 1930, a discussion of inheritance of fusarium resistance in cabbage. The report is in connection with work carried on for several years in selection for resistance with cabbage and outlines such results as have a bearing upon the nature of inheritance of resistance to yellows caused by Fusarium conglutinans Wr.

The same issue of the journal contains E. A. SIEGLER'S "Effect of the Apple Strain of the Crown-Gall Organism on Root Production." The paper reports on experiments planned to furnish information on the effect of this organism on certain tissues of the apple.

GEO. F. WALDO made a trip to the Coastal Plains Experiment Station at Willard, N. C. on May 5th, spending a few days there inspecting the behavior of strawberry hybrids under North Carolina growing conditions.

J. I. LAURITZEN left on May 10th for a somewhat extended trip that will carry him to the middle and western states in connection with his studies of the diseases of onions and other vegetables as related to storage and transit.

LUCIA McCULLOUGH spent two days at Nuttal, Virginia, early in May, planning gladiolus disease control experiments.

C. O. BRATLEY and E. V. MILLER are visiting Boston, Philadelphia and other points in connection with their efforts to obtain records on test strawberry shipments from Chadbourne, N. C.

J. H. BEATTIE went to Florence, S. C. May 1 to superintend the planting of experimental plants of peanuts and sweet potatoes there, and on completion of the work made a trip to South Bend, Indiana, to select land and arrange for planting onions, cabbages, carrots, etc. for bio-metrical studies on muck soils.

J. C. DUNNEGAN left Washington the middle of May for points in Missouri. He will confer with the director and staff of the Missouri Fruit Experiment Station, and with commercial orchard men in connection with his studies of apple diseases.

R. C. WRIGHT made a short trip to Charleston, S.C. to make germination count of stored fresh cut potato seed pieces in connection with his cooperative work with the Bureau of Entomology.

D. F. FISHER attended the meeting of the American Institute of Refrigeration at Washington, D. C. May 2, giving a talk on the influence of storage practice in the development of apple scald. The meeting afforded an excellent opportunity for contact with cold storage and refrigeration interests and the ascertaining of the manner in which the Department can best serve these industries.

FLORENCE HEDGES returned May 3, from a short trip to Chestertown, Maryland, where she is carrying on field experiments on bacterial diseases of beans.

Dr. Taylor announces that Dr. Max A. McCall has been designated by the Secretary as Principal Agronomist in Charge of the Office of Cereal Crops and Diseases, effective May 1, 1930. In this capacity, Dr. McCall will have administrative supervision and direction of the scientific and related work of the Office of Cereal Crops and Diseases.

Fruit growers have long been aware of the fact that their orchards usually contained at least a few more or less worthless trees. It seems, however, that the citrus growers of California were the first to make any vigorous effort to remedy this situation. They, too, had noticed the presence of undesirable trees in their orchards, more apparent in young orchards or those farther removed from the original trees from which the varieties were developed than in the older orchards which were more closely related to the original parent trees. What disturbed the growers, however, was the fact that they were obtaining lower yields of fruit per acre than in the earlier days of the industry and that there was a constantly increasing proportion of fruit of the standard commercial varieties of oranges and lemons that was "off type" in size, form, color, smoothness of skin, or other important characteristics. In some cases these "off type" fruits were so inferior that they had to be thrown into the cull bins. At times, it was difficult to detect them in the packing house and they went out in the regular packs causing dissatisfaction among consumers and lowering the reputation of the crop.

So it came about that, acting on the request of some of the leading citrus growers in southern California, A. D. SHAMEL went out in 1909 to inaugurate studies to determine the variations which had taken place in commercial citrus varieties, to learn the comparative value of different strains arising from these variations, and to work out methods of handling and propagating that would bring the groves to a high level of efficiency. The work has paid high dividends from the start and is still being continued with headquarters at Riverside, California, by A. D. SHAMEL, CARL S. POMEROY, R. E. CARYL, FRANK M. HARRISON, and their associates. The studies soon disclosed the fact that a considerable share of the deterioration was traceable to accidental propagation of undesirable strains of the leading varieties resulting from bud variation. Although there is no generally accepted theory to account for bud variation in citrus, it is of more or less frequent occurrence in trees of all varieties. It may manifest itself in the habit of growth of the trees or their method of branching, the size, form, texture, or color of the foliage, or the form, color, texture, abundance or scarcity of the fruits. Occasionally one tree grown from a single bud will develop several distinct strains of fruit, types of foliage, etc. The nursery propagation of bud variations, it has been found, may be largely avoided through the use of buds selected from individual bearing trees, the performance records of which have shown them to be heavy annual producers of uniform fruit of a desirable strain. Actual field experiments by SHAMEL and his associates demonstrated this in connection with their records and observations of individual trees, where they worked out performance-record plats showing the best trees for commercial use.

A detailed analysis was made of the individual tree records of production. The orchards showing the best and most consistent records for each variety and those where the fruit was found to bring the

highest market price in its class were selected for more detailed study. Usually three or more years of individual-record keeping were required before any selection of parent trees was made. In orchards where the conditions were found to be satisfactory for this work all the highest yielding trees were carefully inspected in connection with their past performances. The type of fruit was carefully examined. The uniformity of fruits on all parts of the tree was studied. All trees bearing irregular fruits or those having variable branches were immediately excluded from further consideration. The highest yielding trees which were found to bear uniform fruits of the best type for the variety were selected as the sources of budwood for propagation.

Only fruit-bearing budwood was cut from the parent tree for propagation. Usually only those bud sticks were secured which had one or more typical fruits attached. As a rule 5 large viable buds are obtained on each orange bud stick and about 10 strong buds with each lemon stick. The buds from this young and somewhat immature growth have been found, both experimentally and commercially, to give better results in propagation than the buds from older growth or from sucker wood. On the average, 1000 good buds are secured from each full-bearing parent tree during a season. The buds from superior parent trees are now generally used by growers along the lines developed by this pioneer work. They topwork undesirable or drone trees in established orchards or topwork trees of one citrus variety with another. These superior buds are used, too, by propagators growing trees for their own use or for sale. In fact a large proportion of such buds from the beginning of the work have been taken by nurserymen who quickly realized the importance of furnishing growers trees from reliable buds. The first top-working on a commercial scale as a result of these investigations on bud selection was done in the summer of 1911, when in a 235-acre orchard of 8-year-old Eureka lemon trees, approximately 2,500 trees of inferior strains, were top-worked with buds from carefully selected trees. By March 1, 1917, the work had attracted so much attention that the California Fruit Growers Exchange established a department of bud selection in the Fruit Growers Supply Company, a cooperative nonprofit organization of citrus growers--which undertook to secure budwood of superior performance-record trees for distribution to growers. Up to December 31, 1929, nearly five million buds had been sold at 5 cents each to members of the organization, 6 cents to others, making the service self-supporting from the start.

Bud selection may not have saved the citrus industry of California from destruction, but it has shown that by top-working with buds from trees having consistently good records for productiveness and quality and by propagating new trees with these same kind of buds, the inferior or "drone" trees of such varieties as the Washington Navel and Valencia oranges can be made productive and profitable. Not only can this be done, it HAS been done. After all, the "proof of the pudding is in the eating," and the present annual value of the citrus fruit crop of California is more than \$100,000,000.00!

FOREST FIRES IN NEW JERSEY. "When on May 13, Mr. Neal turned in the inventories for the various field stations, none was available from Toms River," writes NEIL E. STEVENS. "As a matter of fact, it was uncertain at the time whether there would ever be any more inventories from that laboratory. For following the well-established Plant Industry custom, the members of the office working there were busy fighting forest fires.

"The New Jersey Laboratory is located five miles south of Toms River in a stand of pines overlooking the so-called millpond bog of the Double Trouble Company. This is a picturesque and comfortable location and exceedingly convenient for cranberry disease work. BUT, as some members of the office may have noticed from the newspapers, New Jersey has just passed through the worst forest fires of recent history. Over 100 houses were burned in the towns of Toms River and Forked River during the week of May 9, and most of the timber of Eastern New Jersey was also burned. This included some valuable white cedar owned by the Double Trouble Company.

"Some cranberry bogs in this part of New Jersey were also destroyed, but the buildings belonging to the Double Trouble Company, including the laboratory, were still standing at last report. Also, they lost only a small section of one cranberry bog, which curiously enough was very close to where Miss Dobrosky made her first field experiments on the transmission of false blossom."

NORTH CAROLINA STRAWBERRIES. Dr. STEVENS also reports that in many ways the strawberry deal of 1930 in North Carolina was in sharp contrast to that of 1929. It will be recalled that in 1929 the crop was large and the amount of field rot the largest ever known in the region. This year, due largely to the very dry weather, the crop was much smaller and field rot played almost no part at all. On our experimental plots near the laboratory at Chadbourn, the percentage of field rot was as follows, beginning April 25, the first day on which the crop was large enough to be of commercial importance. The last rain at Chadbourn was April 19.

| | | | | | | |
|--------------------------|---------|--------|--------|-------|-------|-------|
| Date..... | Apr. 25 | Apr 28 | Apr 30 | May 2 | May 5 | May 7 |
| Percentage of field rot. | 19 | 7 | 4.7 | 2.5 | 0 | 0 |

As regards the hauling of the crop, the trucks continue their inroads on the railroad business and in the competition two new features have appeared: First, a few progressive growers are beginning to load their berries on the trucks directly from the field. This, combined with the long established custom of early picking, enables them to start the trucks north at 10 o'clock in the morning and sell them at Philadelphia the next morning. Second, another feature is the appearance of a few buyers who own small fleets of trucks and go with them to terminal markets, thus handling both the buying and the selling of the fruit.

The trucks count on beating the railroad schedules to Washington, Philadelphia, and New York by at least 24 hours. In 1928, the first trucks were used to any extent in the North Carolina strawberry deal; this year they moved about one-half the crop.

PRESQUE ISLE, MAINE. "Potato planting in this section is well advanced," reports P. M. LOMBARD, under date of May 18. "In fact farmers are really finished. Conditions this spring have been very satisfactory for field operations. To date we have had but .7 of an inch of rain for May. Farming operations are late on low land.

"Experimental work on Aroostook Farm is well advanced, and for the most part, all experimental plots will be in this week.

"The potato market, which for the past two weeks has been growing weaker, came up to \$4.00 per barrel Saturday.

"B. E. Brown of the office of Soil Fertility Investigations, Bureau of Chemistry and Soils, is expected Tuesday to put in serial experimental plots."

A LITTLE PEACH IN THE ORCHARD GREW--AND WAS CHRISTENED! Sometime back the AMERICAN FRUIT GROWER MAGAZINE told of an effective advertising "stunt" used by J. M. Wood in south Mississippi. He stencilled the names of some 300 prominent citizens of his locality on strips of gummed paper such as used for sealing store packages. These were fastened around some of his finest peaches by pasting the ends of the paper strips together. The sun did the rest coloring the letters a bright red so that when the tape was removed they stood out clearly against the background of the peach. Mr. Wood then sent out cards reading "A great phenomenon has occurred in the Meriwood Orchard. A peach with your name on it has been found. Come and get your peach on Friday afternoon."

Naturally, on the appointed day a crowd of curious visitors came to the orchard. The sun-printed peaches had been arranged alphabetically on tables in the packing shed, so that each visitor was able to find his particular peach without difficulty. It is easy to understand the amount of publicity the orchard received from this effort. For such purposes, of course, short names are best--not more than six letters.

THE ETERNAL FITNESS OF THINGS! Can you get a mental picture of grapefruit growing along with coffee? That is exactly what is happening in Porto Rico where orange trees, growing in the mountain districts, are used as shade for coffee trees. Incidentally, while citrus growing in Porto Rico dates back to 1900, the early plantings being chiefly orange trees, the shift now is toward grapefruit. In 1928 the crop was estimated to be 1,235,000 boxes of grapefruit, and about 500,000 boxes of oranges.

THAT REMINDS ME--

THAT employees may secure from the Secretary of State, Lansing, Michigan, Form 608 for claiming exemption from payment of tax on gasoline in Michigan--AND that exemption must be taken at the time of purchase as State officials have notified us that refund will not hereafter be made if claim is submitted later.

THAT the Superintendent of Documents, Government Printing Office, Washington, D. C. is offering for sale at 50 cents a copy the new treatise on "Standards of Design for Concrete," No. 3Yb, recently issued by the Bureau of Yards and Docks of the Navy Department. It should prove of great value to engineers and others interested in concrete design.

THAT the term "family" as used in paragraph 47 (c) of the Standardized Government Travel Regulations contemplates any person related to the employee by consanguinity or marriage.

The term "dependent" as used in paragraph 47 (c) means dependent in fact on the employee for any support, even though having other means of adequate support.

Where an employee of the Government in a travel status is furnished meals or lodging by a member of his family, by another Government employee, or by a member of another Government employee's family, without charge, reimbursement therefor is not authorized under any circumstances, either on an actual expense basis or a per diem.

Where an employee of the Government in a travel status is furnished meals or lodgings by a member of his family, by another Government employee, or by a member of another Government employee's family, with charge, in order to authorize reimbursement therefore, it must be shown: first, that the subsistence was not procured because of such personal or official relationship; second, that it was impracticable to secure the subsistence elsewhere; third, that the person furnishing the subsistence was not dependent on the traveler for support. In the absence of such evidence an employee on an actual expense basis is entitled, within the prescribed limit for actual expenses, only to the other authorized subsistence expenses incurred; and an employee on a per diem allowance basis is entitled to one-fifth less for each meal or lodging so furnished with charge. (Decision by Comptroller General, 9 Comp. Gen. p. 353).

THAT travel on official business may be performed by airplane if the cost to the Government does not exceed the cost of railroad fare, plus Pullman fare when length of journey would authorize the use of Pullman accommodations, less land-grant deductions when applicable. (Comp. Gen. 9, p. 354--A-30422).

THAT an employee of the Government, while traveling in an automobile on official business, accompanied by other employees not in a duty status, may be reimbursed only his pro rata share of the cost of gasoline and oil consumed. (A-30415--9 Comp. Gen. 381)

EDITORIALLY SPEAKING. John A. Ferrall

IMAGINE OUR EMBARRASSMENT! We aim to please, but there are times when it appears that it might be well for us to take off a few days for target practice. For example, in the NEWS LETTER of May 15, I ventured to discuss the fact that the onion seems to be gaining strength. Toward the end of the editorial I quoted a POPULAR SCIENCE item that had attracted my attention--something to the effect that laboratory studies at the University of Wisconsin had shown that red and yellow onions contain an acid belonging to the phenol series which stops the growth of parasitic plants. Of course, I should have confined myself to a subject with which I was familiar, but if I adopted this practice it would certainly cramp my style, so to speak.

Well, imagine my embarrassment when a reader calls attention to the fact that I go clear over to the POPULAR SCIENCE MONTHLY "to quote this fact, leading the reader to assume that you were unaware that this contribution was a result of a joint project of long standing between the Office of Horticultural Crops and Diseases and the University of Wisconsin." The assumption would be very well taken indeed, for in spite of the several publications which I now find to have been issued on the subject, I was unaware of the facts stated. I am finding that I am unaware of a lot of other facts, too. Indeed, it is my own unawareness of a lot of the work being done by our investigators that led me to believe that a series of discussions of our projects and lines of activity, of our aims and accomplishments, might prove useful in educating our personnel. It is only fair to add, however, that when the series was planned it had not occurred to me that the editor probably needed this education more than any one else.

Please understand--this attitude of self-depreciation is not voluntary. It has been forced upon me. Entirely aside from onions--and in my defense I might say that life-long experience has taught me to approach onions indirectly, which may account for my tendency to go in a round-about way for information concerning them, too--when I considered the article on bud selection which features this issue, I thought it would be a good idea to present for the first time the actual notes of William Saunders on the introduction of the Washington Navel Orange. I was unaware, you see, that these notes had been published thirteen years ago--in U.S. Dept. Bulletin 445, "The Navel Orange," by Dorsett, Shamel and Popence! I found this out without being told, however.

Things like this naturally cause me to wonder how it happens that I am editing this NEWS LETTER. Can it be--was it George Washington or some other famous general who once had an aide who was conspicuous only for his inadequate mental equipment? The aide, in other words, was a dumbbell. His fellow officers continually wondered how he held his job. One day the General explained. "He is really very useful," he said. "When I am about to issue a general order, I read the draft to him. If he understands it, I know that everybody else will."

 IN A LIGHTER VEIN.

DECLINED THE JOB! Ole had been working in one of the laboratories, getting familiar with our research methods, for a few months and in spite of his unfamiliarity with English managed to become quite popular both inside the office and out. One morning he came down to ask a fellow worker for advice. It seems that the folks at the house where he roomed had asked him to be a pall-bearer at the funeral of a member of the family. "Wot it mane?" asked Ole of his fellow worker. "Wot is dis polar bear?" "Why a polar bear--you ought to know--is an animal that sits around on icebergs and eats snow and fish." Ole looked somewhat startled. "Ay tank Ay no serve," he declared, finally.

DRAMATIC NOTE One of our "correspondents," has sent in the famous four-act playlet "Algy; or the Wilderness Hunter." It is quite short. Act I. Algy sees a bear. Act II. The bear sees Algy. Act. III. The bear is bulgy. Act. IV. The bulge is Algy.

THE OTHER GENTLEMAN? When Professor M---taught at the agricultural college, he was also in general charge of gardens and grounds. One of his men, a good worker but shiftless and of uncertain morals, had been quite ill. Meeting him after his return to work, the professor thought it might be a good opportunity to point a moral. "I'm glad to see you back at work again, Sam," he said, "and I hope your illness has turned your thoughts in more serious directions. When you were so near death, were you not rather afraid to meet your Maker?" "Oh, no," replied Sam, promptly. "It was the other gentleman I was afraid of meeting."

THE PROGRESS OF SCIENCE. Two druggists, says the PACIFIC RURAL PRESS, were discussing one of their confreres who had recently died. "He was a great druggist," said one. "He was," admitted the other. "But don't you think he made his chicken salad a little too salty?"

BEDTIME STORY. A small boy who had been out playing all day was so tired that when his bed time came he crawled under the cover without first saying his evening prayers. "You mustn't forget your prayers," cautioned his mother. "I'm too tired," he complained. "But," urged his mother, "you must give thanks for all the nice things you have. Think of all the poor little boys who haven't a nice home like yours, and good things to eat, and--" "Well, mother," protested the little boy "I think it is those little boys who should do the praying!"

PERSONAL MENTION

E. R. LAKE, B. S., M. S., assistant pomologist, retired on May 15 after continuous service in the office since 1910, when he came with us to assist in the collection and compilation of data for publication on the nomenclature of fruits. Of late years he has been connected with the pecan work. "I wish to add my own good wishes to you upon your retirement," wrote Dr. Taylor. "It has been a personal pleasure to have worked with you so many years, and I sincerely hope that in your retirement you will find a pleasure and relief from your official duties, and enjoy for many years to come an active life, doing the things you like best to do."

Mr. LAKE brought to the office a rich background of training and experience. He is a graduate of Michigan Agricultural College and has taken special courses at Cornell. He served as instructor in botany and horticulture at Michigan and later at both the Oregon and Washington agricultural colleges. He gave up teaching in 1894 and devoted four years to general newspaper and magazine work, while operating his own farm and orchard, but teaching and research called him again and he returned to the Oregon Agricultural College as professor of botany, horticulture and forestry in 1898, holding this position until his appointment to the Bureau's staff in 1910.

The latter part of May marked the loss by retirement of still another valued employee--J. F. FERNALD--well known to the Washington staff and many of our field workers as the kindly superintendent of the cold storage plant at Arlington Farm. He came to the Department on February 13, 1909. For about seven years he assisted actively in the early work of the office in the development of precooling methods and equipment; and in making transportation test trips from producing centers to distant markets to study methods of handling, loading, refrigeration, etc. in connection with the transportation of fruits and vegetables. Since that time he has been connected with the work at the cold storage plant at Arlington Farm, where his unfailing good nature and spirit of cooperation have won the respect and admiration of all who have had occasion to come in contact with him. On May 20, the Washington members of the project, Handling, Transportation and Storage of Fruits and Vegetables, presented Mr. Fernald a gift as a token of their esteem and lasting friendship, and wished him long life, health and happiness as he severed his official connections with the office.

C. A. MAGCOON returned recently from Louisiana, where he conducted experiments on the microbiology of frozen strawberries, and is leaving for a trip to the Pacific Northwest where he will continue his investigations on the frozen pack method of preserving fruits and vegetables.

DAVID GRIFFITHS is the author of "Production of Hyacinth Bulbs," just issued as Department of Agriculture Circular No. 112.



ROYAL J. HASKELL has been appointed extension plant pathologist, effective May 16, 1930, in the Office of Cooperative Extension Work of the Department, succeeding FRED C. MEIER who was recently placed in charge of the new Office of Barberry Eradication of the Bureau. DR. HASKELL comes to the extension field from his position as head of the Plant Disease Survey of the Bureau of Plant Industry, where for several years he has been in close contact with plant disease control problems.

G. B. RAMSEY made a trip to points in Texas and Mississippi during May in connection with the survey he is making of diseases of market crops such as onions and tomatoes. Incidentally, the BOTANICAL GAZETTE for April published the paper on "Effects of Ultra-Violet Radiation upon Sporulation in Macrosporium and Fusarium," by Dr. RAMSEY and ALICE A. BAILEY, bringing to mind the fact that misleading newspaper accounts of the presentation of this paper at the Des Moines meeting caused the authors to receive some amusing letters of inquiry from people taking ultra-violet treatments!

J. R. DEMAREE and J. R. COLE are represented in the JOURNAL OF AGRICULTURAL RESEARCH for May 1 by a paper on "Pecan Leaf Blotch," a disease which appears to be rapidly increasing in importance.

GUY E. YERKES and CHARLES F. SWINGLE made a short trip to St. Thomas, Pennsylvania, to assist in obtaining data in cooperative orchards.

PHILIP BRIERLY is visiting points in New York, Connecticut and New Jersey in connection with his investigations on dahlia stunt disease. He is also assisting in the narcissus and other ornamental bulb disease work.

F. L. WELLMAN, formerly agent in the office, discusses in Technical Bulletin No. 181, just issued, clubroot of crucifers--work done under the supervision of Dr. J. C. WALKER and in cooperation with the department of plant pathology of the University of Wisconsin.

J. R. MAGNESS made a trip to Hancock, Maryland, late in May to conduct investigations in relation to the moisture supply in production of apples.

SPECIAL NOTE. The NEWS LETTER would like to say some nice things about you--to tell of interesting developments in connection with your work--to print items that would help your associates in the office to a better understanding of what you are doing--but it can't unless you help. Send us notes about your official trips and observations, reports on the work at your station, etc.



THE OFFICE OF HORTICULTURAL CROPS AND DISEASES

S E M I - M O N T H L Y N E W S L E T T E R

The Official Organ of the Office of Horticultural Crops and Diseases,
Bureau of Plant Industry, United States Department of Agriculture.

John A. Ferrall, Editor

This NEWS LETTER is for distribution only to employees of the office, and the material in it is of an informal and confidential nature and is not to be published without the prior approval of the Office of Horticultural Crops and Diseases.

Vol. II

Washington, D. C., June 16, 1930

No. 12

CURRENT
OBSERVATIONS!

It may be news to some of our clerical personnel at least that the "currants" one happens across at intervals in cakes and puddings are not actually currants at all-- that is, they are not the fruits of the currant bush. They are dried grapes. And when you feel inclined to criticize because your portion of cake or pudding contains entirely too few, you might stop to consider that Pliny refers to these currants as being produced in Greece as far back as 75 A.D.--after which there appears to be no further historical record of them for nearly a thousand years. So, you see, the currant has an inherited tendency to make itself scarce!

According to GEO. C. HUSMANN, the name currant appears to have been developed by gradual evolutions from "Corinth," the name of the port from which the early supplies of this fruit reached western Europe. Currant or currantes was applied to these grapes as early as 1578, a century or two before the common garden currant was first cultivated.

Currant grape varieties were introduced into California as far back as 1861, and other introductions followed. Among these, however, there appears to have been no valuable dark colored varieties, but merely some fairly productive red and white strains, producing fruit of inferior quality. The "Panariti" was introduced by the Department, a consignment of cuttings from David Fairchild (then agricultural explorer) reaching Washington on May 9, 1901. He secured the cuttings in the village of Panariti, which lies among the mountains back of Xyloncastron, and is noted as producing some of the finest currant grapes in Greece. These Panariti cuttings were distributed to grape growers in California, Arizona and southern Nevada, and some were used in the Department's experiment vineyards in California.

Exceptional difficulties were found in growing these and the problem was turned over to the viticultural investigations.^{unit} It was a problem that manifestly demanded the attention of specialists, and the patient was placed in the care of GEO. C. HUSMANN. It was shortly after this that HUSMANN observed the first streaks of gray in his hair! The grapes simply refused to succeed. Something was lacking.

The studies of HUSMANN and his associates (ELMER SNYDER, associate pomologist, RICHARD SCHMIDT, formerly scientific aid, and FRED L. HUSMANN, superintendent) gradually disclosed the fact that two cardinal points must be observed if these grapes were to prove commercially successful. In the first place, they must be grafted on phylloxera-resistant stocks congenial to them, and suited to the soil and other conditions in which grown. (Phylloxera, incidentally, destroyed the vineyards in France some fifty years ago, these vineyards being re-established on phylloxera-resistant grape stocks from this country. A call has recently been received and permission granted by Doctor Taylor for HUSMANN to prepare a memoir responding for the United States to an inquiry which the Revue Viticulture of France is making on the Fiftieth Anniversary of the advent and destruction by Phylloxera of the vinifera grape industry and the extent of its reconstruction since by means of American grape species resistant to phylloxera.)

Second, and the rediscovery of this secret meant the difference between our paying for 30,000,000 pounds of these dried grapes annually imported and the growing of our own currant grapes, it was found that the vines must be thoroughly girdled at the proper time! Perhaps one should say "at the psychological moment," considering the innate perversity of these grapes. The practice of girdling the vines was known, of course, but the secret which the inhabitants of the currant-producing countries had guarded and which HUSMANN discovered is that the girdling to be effective must be done when the vines are blooming.

Two parallel incisions through the bark are made around the trunk, arms or canes of the vines, and the bark between the cuts is taken out. This girdling not only promotes a full setting and maturing of the fruit, but leads to better quality and practically doubles production.

Prior to the successful establishment of the dried currant grape industry in the United States, this country imported 30,000,000 pounds of dried currants annually--say the equivalent of 50,000 tons of fresh grapes, since it requires about three and one-half pounds of fresh grapes to make one pound of dried. We paid about five cents a pound for this fruit. "But the time we had to rediscover the necessity of girdling these particular currant grapes WHEN THEY ARE BLOOMING!" exclaims HUSMANN, who adds: "However, I have no regrets over the matter."

And neither have American growers of currant grapes!

POTATO NOTES

FROM CHARLESTON.

On June 1, WALTER M. PEACOCK, associate horticulturist, returned from Charleston, S. C., where since May 23 he had been assisting W. J. Reid, Jr., of the Bureau of Entomology in the harvesting of a potato experiment for the control of the seed corn maggots in the potato seed pieces.

It is reported that the prospects for a big yield of potatoes were never better than they were the middle of April. The stand was almost perfect and the foliage was of an unusual size. The growers report a drought of six weeks, from April 11 to May 23. After the former date there were only light showers which merely dampened the surface of the soil. The growers' reports check closely with those of the U. S. Weather Bureau. However, the amount of rainfall measured by the Weather Bureau is liable to vary considerably from the rainfall three miles distant. For example, on May 23, about 9 A.M., a cloudburst passed over the farms where the experiment is being conducted, and water was still standing between the rows at 1 P.M. The Weather Bureau at Charleston reported a rainfall of .03 inch for a 24-hour period covering the time of the heavy shower at the farms. This indicates the desirability of recording the amount of rainfall in the field where the experiment is being conducted, rather than depending on records made a few miles away. This is more especially true during the growing season.

The yield of potatoes in the vicinity of Charleston varied from 40 to 130 bbls. per acre. The average yield of marketable potatoes is about 55 bbls. per acre. Those who planted early, kept the growing plants well sprayed and cultivated, and side-dressed the rows of potatoes with one and two applications of fertilizer, harvested big yields with a larger percentage of U. S. Grade No. 1.

The practice of side-dressing potatoes is increasing in this section. The first application, when more than one is made, is applied when the plants are 2 to 4 inches above ground and the second application when the plants are about 10 inches tall. The chief advantages seem to be a better distribution of fertilizer and the prevention of the leaking out of the readily soluble salts in times of heavy rainfall.

The price f.o.b. shipping point, ranged from \$5.25 on May 23, to \$4.00 and \$4.25 on May 26 and 27, and then the demand became strong on the afternoon of May 28, and the next day the growers sold in advance at \$4.50 for U. S. No. 1, and \$2.75 for U. S. No. 2.

The stand of cotton is about perfect, and it has made an excellent growth for the time of the year. The lima bean, tobacco and corn crops are looking unusually well despite the fact that the rainfall since February is much below normal. This proves again that a shortage of rainfall during the growing season is often not as disastrous as an excessive amount of rainfall, and especially on poorly drained land.

HORTICULTURAL
PRODUCTS IN
HIGH FAVOR!

Farmers' Bulletin No. 1291, "Preparation of Fresh Tomatoes for Market," emphasizes the extraordinary history of this product of horticulture. As late as 1818, the tomato was practically unknown in this country--yet in a recent year the car-lot shipment of fresh tomatoes alone reached a total of 32,996 cars. Car-lot shipments, of course, form merely a small proportion of the total production as it is estimated that twice this amount is produced in home gardens or by market gardeners in the vicinity of consuming centers. And the production for canning purposes has reached a total of five times the volume of car-lot shipments of table stock.

Commenting on fruit values, an editorial in the Wall Street Journal for June 3, quoted by the Daily Digest, says: "Returns of the Department of Commerce show that in 1929 exports of fruit, fresh, dried and canned, had a total value of \$136,000,000. In order to avoid a discussion of the question whether the tomato is a vegetable or a fruit, all vegetables, fresh and canned will be included, making the total \$162,000,000." This group makes up 21.5 per cent of the total value of exports of foodstuffs of all kind. "A dried prune or a bunch of grapes may not appear of much importance, but when exports of the different fruits and vegetables combined paid for 3.6 per cent of all merchandise of every description imported in the year, they are worth considering. when it is recalled that the exports are only the surplus that we can not consume ourselves, the wonder is how much of these products the country produces and consumes. The answer is that this group of products has an aggregate cash value greater than the cotton crop. Transportation to the market calls for a million cars, many of which cross the continent. About 42 per cent of California's production is hauled over 3,000 miles and another 35 per cent gives a haul of not less than 2,000 miles. Florida also gives the railroads a fairly long haul, 82 per cent of its output moving between 1,000 and 2,000 miles. This helps to pay dividends and sustain the value of railroad securities.

"But freight and enlarged purchasing power are not the only contributions made to the country by the fruit and vegetable producers. The great gain is in the consumer's market basket. The people as a whole today enjoy a varied assortment of fresh foods that a few decades ago would have been luxuries for the wealthy."

"As railroad freight, tomatoes have increased in ten years from 15,000 to 36,500 carloads (including some from Mexico and Cuba and excluding canning goods); peas for fresh consumption from 691 carloads to 6,000, and lettuce from 7,000 carloads to 51,000. Substantial earnings are shown by these figures, but what is of more importance is the increased health of the people resulting from this great change in their diet."

FIRE AT THE
ARLINGTON
FARM.

Fire of unknown origin at the Arlington Experiment Farm on the morning of June 7, destroyed one of the olders buildings on the place--a barn erected some twenty-five years ago.

The building itself was of little value but a number of valuable electric motors and some laboratory equipment stored in it were lost, together with six horses and four mules. Because of the intensity of the fire it could be seen from many points in Washington and Virginia and attracted a large crowd but the very rapidity with which it spread made the efforts of the two Washington fire companies and the volunteer companies of nearby towns unsuccessful in saving the barn and its contents. They did, however, do splendid work in preventing the spread of the fire to other buildings on the farm.

SALARIES MUST
NOT INCLUDE
AUTO HIRE.

One of the Bureaus of the Department increased the salary of an employee paid on an hourly basis from 35¢ to 50¢ an hour, the increase to cover his use of a personally owned automobile for official work. The matter being called to the attention of the Solicitor, he says:

"The Department is without authority to enter into any agreement which includes in the salary compensation the hire of an employee's automobile. There are two ways in which an employee's automobile may be utilized by the Government. (1) by reimbursement on a basis of actual operating expenses, and (2) by the payment of not to exceed 7¢ per mile. Any other method is illegal, and the method pursued by the Bureau in the instant case of computing assumed operating expenses and increasing the employee's salary is particularly objectionable."

In view of this opinion, Dr. Stockberger has asked the chiefs of bureaus and offices of the Department to issue the necessary instructions to the end that reimbursement for official use of personally owned automobiles as an element of compensation or salary may be avoided.

AGRICULTURAL
BUILDING
FINISHED.

The new Agricultural Building has been in effect ready for occupancy for some weeks and a number of offices are already installed, of course, but on June 12 the Association of Federal Architects held a dinner at Washington to celebrate the finishing of the structure. This was the first time the building had been lighted inside and out. It is the first complete structure in the Mall building program. The lighting equipment, incidentally, includes a rheostate development that illuminates the facade.

EDITORIALLY SPEAKING. John A. Ferrall

"If you are weary of the routine of grapefruit or orange juice with your breakfast," suggests Knowles A. Ryerson, in a contribution to the 1930 Yearbook of the Department, "you might ask your fruit man at the market for a papaya."

The papaya is one of horticulture's best substitutes for the melon, which it somewhat resembles, and a pleasant variation from the citrus fruits. In the Hawaiian Islands it is the universal breakfast fruit, and it is greatly esteemed in many other tropical and subtropical countries. In the United States, its culture is as yet limited to southern Florida--south of the latitude of Tampa and Titusville--with commercial plantings restricted to the more tropical parts of this section. Some are planted in California as ornamentals and occasionally bear fruit, while papayas may also be grown in favored localities in extreme southern Texas. Nearly all of the Florida crop is used in the home or sold in the local markets. As a dessert or breakfast fruit, papayas are eaten in much the same manner as muskmelons. They contain peculiar and valuable digestive properties, largely due to the presence of papain, a very active ferment somewhat similar to pepsin, making them of decided value in the diet.

Being full of his subject, as it were, a writer in the FORT LAUDERDALE (Florida) NEWS recently gave way to his enthusiasm concerning the papays. "Mellowed and gilded by the benign and beaming sun," he declared, "nurtured in the wondrous soil of this subtropical land, flavored and sweetened by the fragrant dews, redolent of the spices of Araby, and waftures from far away isles of aromatic perfumes, the delicate and delectable papaya now holds its golden sway in southern Florida, giving gustatory thrills to the finely attuned palate and gaining new devotees by introduction among those who never before experienced its hidden and unheralded delights.

"Unlike the rosy apple that conceals the serpent's sting uncovered by the pearly teeth of our common mother Eve, the papaya conveys health with the toothsome exploration of its luscious flesh, titillating the gastronomic nerves with pleasurable satisfaction and leaving the fortunate consumer with the consciousness of having performed a high and sacred rite in catering thus to his stomachic need and yearning.

"The papaya plant is at once a most prolific and sensitive entity in the fruit and vegetable kingdom, partaking of the nature of both. The fruit has the form and substance of a melon, yet it hangs in clusters from the trunk of a tree, and while it is both fruit and food, it contains certain specific and indubitable qualities calculated to promote digestion and its leaves and stalk flow instantly with latex upon being abraded ever so slightly by the finger nail. This milk when dried and reduced to powder becomes known as papain with recognized standing in the pharmacopoeia and of acknowledged value in the medical realm. Then, all hail the papaya! May the knowledge of its manifold virtues increase to the good and welfare of mankind."

IN A LIGHTER VEIN.

THAT YARD DOG! A Government worker who has an attractive garden in the suburbs, had been very much annoyed by petty thieves who visited it during the hours he was at the office. He finally decided to buy a dog as a protection. He delegated the matter of purchase to the old colored man-of-all-work about the place, emphasizing the fact that what he wanted was just a good yard dog. When the worker arrived home that evening there was no sign of Uncle Mose or the dog. However, at about 8 o'clock, the old man came, leading--a dachshund.

"Why in the world did you get that sort of dog?" asked the worker

"Well, suh," explained Uncle Mose. "You don' tote me to get a good yard dog, and this was the nearest I could git--he's two feet and eleven inches long!"

GARDEN SONG

He planted phlox and feverfew,
Tulips and Seven Sisters.
He bought a hoe and used it, too--
But all he raised was blisters.

NOT IN THE PICTURE! "Children," said the Sunday School teacher, "this picture illustrates today's lesson. Lot was warned to take his wife and daughters and flee out of Sodom. Here are Lot and his daughters, with his wife just behind them. And there is Sodom in the background. Now, has any little girl or boy a question to ask before we take up the study of the lesson. Well, Susie?"

"Pleathe, thir," lisped the youngest in the class, "where is the flea?"

COOPERATION

You have a dollar; I have a dollar--
We swap.
Now you have my dollar; I have yours--
We are no better off.
You have an idea; I have an idea--
We swap.
Now you have two ideas; I have two ideas--
Both are richer.
What you gave, you have; what you got, I did
not lose.

This is cooperation!

(Sunkist Courier)

THE FLOWER WEDDING. The groom, of course, was Sweet William; and the bride a Matrimony Vine. Bridesmaid: Primrose. Best Man: Johnny-Jump-Up. Thyme: Four o'clock. Music: Trumpet Vine. Minister: Jack-in-the-Pulpit. Among those present: Poppy, of course! And Blue Bells, Batchelor Buttons, Wall Flowers--and a Wandering Jew!

PERSONAL MENTION

LAURISTON C. MARSHALL of Princeton University, and a collaborator of the office, was in Washington on May 30 and 31 for conferences in connection with plans for the construction of special precision propagating chambers. Mr. Marshall has been authorized to visit the Corning Glass Works and the Cooper-Hewitt laboratories in search of special materials for use in constructing this chamber.

NELLIE A BROWN is making her headquarters at Hood River, Oregon, and for the next two months will cooperate with Dr. J. S. Cooley and E. V. Shear in work on the perennial canker of apples.

MARY K. BRYAN is making a short visit to points in Mississippi in connection with her investigations of bacterial canker of tomatoes.

J. R. COLE has gone to Fayetteville, Arkansas, to investigate an unknown plant disease. He will work in cooperation with Prof. V. E. Young and Paul H. Miller, Chief Inspector of the Arkansas State Plant Board.

J. R. DEMAREE is visiting points in Alabama and Mississippi in connection with his investigations of pecan diseases and plans to attend the meeting of the Southern Branch of the American Phytopathological Society at Jackson, Mississippi, June 11-16. This meeting will provide such an excellent opportunity for meeting growers and discussing problems that several other members of the scientific personnel who may be in the vicinity of Jackson at that time are expected to attend. H. R. FULTON and NIEL E. STEVENS, both now in the Gulf Coast region, are expected to attend the meeting.

T. RALPH ROBINSON returned to Washington May 29th after a two month's trip to California, Arizona and Texas, where he inspected the various field tests of the Crop Physiology and Breeding Investigation unit of the office and, in California, devoted especial attention to the avocado pollination problem.

D. F. FISHER made a visit to Rochester, New York, and other points in the State early in June to confer with officials of the international apple shippers' association and steamship officials to make arrangements for apple shipping tests.

DAVID GRIFFITHS is planning a trip to Chico, California; Portland, Oregon; and Bellingham, Washington, in connection with his bulb investigations before the close of the Fiscal Year on June 30.

THE OFFICE OF HORTICULTURAL CROPS AND DISEASES

S E M I - M O N T H L Y N E W S L E T T E R

The Official Organ of the Office of Horticultural Crops and Diseases,
Bureau of Plant Industry, United States Department of Agriculture.

John A. Ferrall, Editor

This NEWS LETTER is for distribution only to employees of the office and the material in it is of an informal and confidential nature and is not to be published without the prior approval of the Office of Horticultural Crops and Diseases.

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No. 13

GOOD THINGS
BEAR REPEATING!

We who are helpers of our Uncle Samuel have the somewhat dubious blessing of being able to turn over two new leaves every twelve months--the first on January 1, the beginning of the calendar year; and the second on July 1, the beginning of the Fiscal Year. For many of us the latter is the more important.

Perhaps the most valuable suggestion regarding the new leaf and the resolutions accompanying it is a very old one--note carefully the terms of your letter of authorization and make sure that it gives you authority to incur the expenses and carry on the investigations you have in mind. If not, communicate with the Washington office at once to ask for whatever amendment you think necessary. Until you have been definitely advised, either by wire or letter, that authority has been granted, do not incur the expenses.

Then, too, it is well that--but you know as well as we do where difficulties may be expected, and the caution that is necessary to avoid interference with your work--and financial loss. It is so easy to hand out advice and most of you may be a good bit like a certain small girl whose mother was lecturing her on some of her shortcomings. "It shouldn't be necessary for me to speak to you so often about these things," said the mother, concluding the lecture. "You should remember after the first time. I should think that you would get tired of hearing me talk about these things."

"Well, mother, I do," said the child in a decided tone.

We of the Washington staff are really pretty good scouts, if we do say it ourselves as shouldn't. The rather frequent don't-do-this and don't-do-that tone is the result of long experience which has demonstrated the fact that while, like the red light at the railroad crossing, it does not always save "lives," it does help make folks more cautious than they would otherwise be.

"The Washington end of things to the field man all too often is an abstract sort of a place where he sends vouchers or letters and sometimes gets action--a machine-like sort of proposition that cold-bloodedly deducts from his accounts anywhere from thirteen cents to as many dollars for excess expenditures for anything from laundry to storage of automobiles, and never adds anything to the account," said H. E. Allanson in a talk before field workers some years ago. "It is made up of the men the field man knows, and those he does not know, the latter being vague, indefinite, but omnipresent machine-like individuals, unsympathetic, uninformed on the work and problems of the field worker, and generally reactionary, who somehow are just where they can't be reached but very real as they are always the ones to blame for this or that calamity in the progress of a reimbursement voucher.

"And yet, in spite of their reputations, in spite of the evidence, these men at Washington are really quite human. Contrary to the popular conception of the field man, they put in a good day's work each day, they do their best to help the field men get back all possible from their accounts and as quickly as possible, and they understand and sympathize with the field workers in the problems with which they have to contend.

"...We are all one great firm, big in numbers, big in the volume of our work and our undertakings, and big in the area we cover. And right there may be where many of our difficulties lie. The quantity of work, the enormous volume resulting from steady streams pouring in from every section of the country to Washington headquarters makes organization imperative. It is similar to the down-town traffic of a large city--streams of people on foot, in automobiles, streetcars--a multitude of humanity in all kinds of vehicles. If the traffic is well organized the crowds move systematically with little loss of time; if not, chaos. There is traffic direction of all sorts--signs, lights, ropes, railings, and policemen.

"The Fiscal and Administrative Regulations of the Department are the traffic guides that direct the volume of business necessary in connection with our work. Just as surely as a pedestrian, straying out of the prescribed paths, is caught in the vehicular traffic with disastrous results to himself and a tie-up of traffic affecting all, just so surely does failure to observe departmental rules and regulations result in difficulties for the individual and a general disturbance and slowing up of the forward movement of all business traffic with us."

HEALTH, HEART, HAND and HEAD! As this issue of the NEWS LETTER was being prepared, a "tented city" rose on the Department of Agriculture grounds opposite the--er--editorial office. It was the annual encampment of the 4-H Club boys and girls who are given an opportunity to get a glimpse of Washington as a city along with an insight of the activities of the Department. These boys and girls are going to play an important part in the progress of American horticulture. The 4-H stands for HEALTH, HEART, HAND AND HEAD, we are assured, and we hope that the effort will always be made to place the head first rather than last in the actual progress of the club members. A judicious use of horticultural products, of course, will do much to guarantee the health part of the program.

"A youth movement of which no one need have forebodings is proceeding on the farms and in the small towns of this country," declares Capper's Farmer. "It is of great import to agriculture. It is developing the personalities of the men and women who will be the leaders of the farming industry in the very near future. It is a movement every citizen of our country should foster and aid. Today nearly 700,000 boys and girls, mostly from farms and small towns, are enrolled in 4-H clubs.

"These clubs--there are close to 50,000 of them in the United States--are making over the rural life of America on sound lines, both socially and economically. Their members, boys and girls between 10 and 18 years of age, are learning to do by doing. They are learning team work. They are developing leadership and leaders. It is my judgment that the products of these 4-H clubs in the next few decades will have the most to do in adjusting the farm life of this country to the industrial civilization that seemed for a while as if it would sweep agriculture and rural life into the back eddies of the stream of progress...."

"When we say there are nearly 700,000 boys and girls in the 4-H clubs, that sounds like a large number. But there are some 11 million boys and girls between the ages of 10 and 18 on the farms and in the rural towns of America who ought to be enrolled in the 4-H clubs. It is our ambition to have a county agent in every county in the United States, and 4-H club membership within the reach of every farm and smalltown boy and girl in the United States....The 4-H club movement... is one of the most significant and hopeful signs of this generation...."

The encampment, which closed with a night program on June 24, was the fourth annual affair of this sort, invitation being extended each year to the various States and Hawaii to send to the camp four club members (two boys and two girls) together with two State Extension Service representatives engaged in work with young people. The camp programs are featured by addresses by well known speakers; educational tours, etc.

EXPRESS SHIPMENTS. On page 86 of the NEWS LETTER for May 1, 1930, we called attention to the fact that the use of express charge slips should be discontinued and those on hand returned to us at once for cancellation.

Mr. Meloy has just written concerning his efforts to obtain information as to how shipments arriving at destination ahead of bills of lading or possibly with charges collect, should be handled. The Comptroller General has authorized the following procedure, outlined in P.B.A. Circular No. 151:

"Where it is impossible to secure the use of the standard forms of Government bill of lading by cooperators, collaborators, vendors or others supplying the Department with information, the papers evidencing the contract of shipment, such as the company's delivery record of Government shipment or a commercial bill of lading, should be attached to Standard Form No. 1058, original bill of lading, identifying them briefly with each other, and executing the 'consignee's certificate of delivery' printed on the face of such standard form. Where necessary the form of 'Report of Loss, Damage or Shrinkage' printed on the reverse of the standard form should also be filled out and signed. A memorandum record of the transaction may be maintained by the use of Standard Form 1058a--Memorandum copy of bill of lading."

The Director of Personnel and Business Administration for the Department in directing that employees govern themselves by these instructions calls particular attention to the fact that Standard Form No. 1060, "Temporary receipt," should not be used unless there is a reasonable certainty that a bill of lading was executed by the consignor and has been either delayed in transmission or lost. "The availability of a procedure in the absence of the Government bill of lading," he adds, "should not be permitted to encourage neglect on the part of employees to use Form 1058 for express shipments chargeable to the Department and to provide as far as possible for such use by private or commercial consignors. The effort should be to maintain the instances of nonuse of the form to a strict minimum."

The bill of lading forms, of course, are to be handled in the usual manner with the exception that one additional memorandum copy is to be made for retention by the consignor, the original copy must be sent promptly to the consignee, the memorandum copy to us, and the shipping order must be given to the transportation company at the point of shipment.

In this connection, make sure that all remaining copies of the numbered charge slips you have are returned promptly to Mr. Swartz. And let him know promptly the number of bills of lading that will be required for use at your station in the near future, so that he may have them sent to you.

GASOLINE TAX EXEMPTION. In connection with the problem of gasoline tax exemption in the various States, the Director of Personnel and Business Administration for the Department has decided that the exemption form used in the State of Pennsylvania will probably be all right for other States and a supply of this form has been prepared and is being sent to our employees for their use. Dr. Stockberger's letter to the Chiefs of Bureaus and Offices relative to this reads:

"Since the issuance of P.B.A. Circular 143, "Gasoline Tax exemption procedure in various States," information has been received from the field to the effect that in some States forms are not available or are not well suited to the purpose, and it has been suggested that if an exemption form were prepared in the Department this might be acceptable to the dealers and tax officials in such States.

"In this connection attention is invited to P.B.A. 132, with which was copy of an exemption form prepared by the Chief Coordinator for use in the State of Pennsylvania. One of these forms is attached. It will be seen that it refers to no particular State and may be used to the extent that dealers and State officials will accept it wherever State forms are not furnished or are unsuitable. If tax is remitted on the strength of this form, a single receipt only need be taken, but this should always bear notation that the price excludes the State tax.

"Supplies of the form are obtainable from Central Stores. It is assumed that this particular model will ultimately be superseded by a new form upon which the Chief Coordinator is understood to be working.

"Occasion is taken at this time to refer to P.B.A. Circular 119, 'Purchase of gasoline from vendors who are not payers of State tax,' accompanying which was circular letter of the Chief Coordinator referring to the Supreme Court decision in the Lash's Products case to the effect that a gasoline retailer to whom the State tax had been 'passed on' as an increment in price was not within the Federal exemption requirement. In view, however, of the fact that the majority of the gas-taxing states have undertaken to grant exemption to Federal agencies irrespective of the status of the vendor as a direct tax payer, every purchase for Federal use which includes a State tax should be vouchered in duplicate even from a retailer known not to have paid the State tax except in the form of a price increment, and the duplicate receipt should be scheduled to the General Accounting Office as provided in P.B.A. Circulars 104, 130."

The first part of the report deals with the general situation of the country. It is noted that the country is in a state of transition, and that the government is working to establish a new order. The report also mentions the importance of maintaining law and order, and the need for a strong central government.

The second part of the report discusses the economic situation. It is noted that the economy is in a state of depression, and that the government is working to stimulate economic activity. The report also mentions the importance of maintaining a stable currency, and the need for a strong financial system.

The third part of the report discusses the social situation. It is noted that the population is in a state of poverty, and that the government is working to improve the living conditions of the people. The report also mentions the importance of maintaining social order, and the need for a strong social system.

The fourth part of the report discusses the political situation. It is noted that the government is working to establish a new order, and that the people are in a state of uncertainty. The report also mentions the importance of maintaining political stability, and the need for a strong political system.

The fifth part of the report discusses the military situation. It is noted that the military is in a state of readiness, and that the government is working to strengthen the armed forces. The report also mentions the importance of maintaining national defense, and the need for a strong military system.

The sixth part of the report discusses the foreign relations of the country. It is noted that the country is working to establish friendly relations with other nations, and that the government is working to improve the country's international standing.

LONG-DISTANCE TELEPHONE CALLS. Recently the assistant chief of the audit division wrote: "It is noted in the audit of voucher.... that toll charges are not supported by a certificate to the effect that the rates charged were in effect at the time the services were rendered and that they are not higher than those charged the general public for similar service....future vouchers covering toll charges should bear certificate."

Quite a large number of vouchers for telephone service are returned to us for this statement. In order that such vouchers may be passed for payment with the least possible delay, please see that the required information---The rates charged were in effect at the time the services were rendered and are not higher than those charged the general public for similar service-- is written on the voucher before the telephone company signs it.

We find that as a rule where the telephone companies submit certified bills this information is contained in their stamped certification. But make sure that all such vouchers you send in contain this statement.

MEALS TAKEN AFTER ARRIVAL AT POST OF DUTY. "An employee whose official duty station is New York City," says the Comptroller General in a decision of April 3, 1930 (A-31014 - 9 Comp. Gen. 430), "who, in returning from a trip on official business, arrived at the Grand Central Terminal at 6:35 p.m., is not entitled to reimbursement for the cost of a meal taken after arrival, under the Standardized Government Travel Regulations.

The meal is regarded as taken at his official station and not "en route to" that station.

MISTAKE IN MAILING BLUEPRINTS TO BIDDERS. Through a mistake, the wrong blue print was mailed to several of a group of bidders on steel for Government use, and these bidders naturally based their estimates on the wrong information. The Comptroller General has decided (A-31036, 9 Comp. Gen. 432) that "Where, in requesting bids for the furnishing of steel to the Government, the wrong blue prints were sent to some of the bidders and the contract was awarded to one of the bidders to whom wrong blue prints had been sent, it should be cancelled and the matter readvertised in order that bidding may be on common ground."

Mr. Swartz can usually supply complete copies of these Comptroller decisions to any one interested in the rulings.

EDITORIALLY SPEAKING. John A. Ferrall

SURPRISING LAND VALUES. Writing for the National Geographic Magazine concerning his observations in the Canary Islands, David Fairchild comments on the surprising land values. "It should not for a moment be imagined," he writes, "that the terraces of the Canaries grow only cereals, or that they are cultivated at a loss, from American standards. Far from it; for wherever there is water for irrigation--and there are thousands of acres where this is the case--unbelievable profits are made from growing the Chinese dwarf banana, which is sold in the markets of Europe. I had become accustomed to high land values from my experience in south Florida, but when I learned that you could not buy some of these terraced gardens of bananas for \$12,000 and even \$15,000 an acre, and that these had yielded to their owners a 10 per cent gross profit on their valuation, which would mean a 7 or 8 per cent net profit, I concluded that I was looking at the most expensive agricultural land that I had ever seen.... To farm, at a profit, land worth \$15,000 an acre, would, I think, tax the ingenuity of even a Californian..."

AND GOVERNMENT CHECKS--- It was Dr. Fairchild, incidentally, who long ago produced a tangible demonstration of the value of the old pay check as a "life saver". Most of us have long accepted the truth of this--but he proved it. This happened back in 1894 when he was visiting Corsica in the hope of securing citron cuttings for trial in this country. While awaiting for the return of the mayor of the town, who was visiting a neighboring village, Dr. Fairchild walked about the place on a preliminary tour of inspection. Thinking to establish friendly relations with the people, he proceeded to take their pictures.

Standing with his head under a focussing cloth, he was startled by a rough grasp and came out to find himself in the clutches of the village policeman. The latter insisted on seeing Dr. Fairchild's "papers" which, unfortunately, were at the hotel in another town. Explanations did no good and Dr. Fairchild was taken to jail, a place that may be better imagined than described. There he found that he was suspected of being an Italian spy! A n examination of his rough botanical notes, appeared to confirm the suspicions of the police agent.

For some three hours Dr. Fairchild argued his case. No success. Then in looking through his pockets for some official paper that might serve to identify him, he found a Government check. Counting upon its official appearance, he proceeded to insist that this was his paper of United States citizenship. The police agent, who could not read English, was immediately impressed and after a lengthy examination of the check unlocked the jail door and gave Dr. Fairchild his freedom! He left town as quickly as he could--but not, however, without stopping to cut a few scions from citron trees as he passed along--enough to graft a small orchard. These were later established in California.

 IN A LIGHTER VEIN.

FOLLOWING DIRECTIONS.--The passerby stopped in amazement as he came to where his neighbor was about to start painting a barn, says The Florida Grower. "What in the world are you wearing two coats for on a hot day like this?" he inquired.

"Well, I'm going to paint my barn," said the neighbor, "and the directions say: 'For best results put on two coats.'"

Wake! for the son has smashed the silent night
 With what sounds like a ton of dynamite
 THE FOURTH! And even now is waiting patiently
 For fragments of the henhouse to alight.

THE SUMMER VISITOR.--"Oh, what a strange looking cow," said the young lady from the city. "Why hasn't it any horns?"

"Well, you see," said the farmer, "some cows are born without horns and never have any; others shed theirs and some we dehorn. Some breeds are not supposed to have horns at all. There are lots of reasons why some cows haven't any horns, but the big reason that cow has no horns is because she isn't a cow--she's a horse!"

Before the last bombarded rooster died
 THE FOURTH! A childish treble from the doorway cried:
 "Say are you people goin' to sleep all day,
 With all the fire engines here outside?"

"The shrinking violet of yesterday, "declares your Uncle Samuel,
 "is likely to be the Tiger lily of today."

And now a new Fourth, reviving old desires,
 Full many a man an old horse-pistol fires
 THE FOURTH! And here and there somebody gets in range
 And causes general gloom as he expires.

BEDTIME STORY.--Once upon a time there was a man who had been receiving anonymous letters. Nasty ones. Though the handwriting was decidedly individual, detectives had not been able to trace the writer. The man went to a fancy dress ball and in asking for a dance noticed on the girl's program a signature with the handwriting of the anonymous letters. He waited. Soon a fellow dressed as a lion came along....And now things are more anonymous than ever. All the man knows is that a fellow dressed as a lion socked him.

PERSONAL MENTION

DR. AUCHTER will sail July 9 on the PRESIDENT HARDING for three months in Europe. While abroad he will visit the horticultural, plant pathology, plant physiology and plant breeding research institutions and the horticultural industries in several countries. He has been appointed as an official representative to three international congresses. From July 28 to 31 he will attend the International Congress of Subtropical Agriculture at Antwerp, Belgium. From August 7 to 15 he will attend the International Horticultural Congress at London, where he will present a paper entitled, "American Experiments in Propagating Deciduous Fruit Trees by Stem and Root Cuttings." From August 16 to 23 he will attend the International Botanical Congress at Cambridge. DR. AUCHTER has been appointed as the American representative on the Executive Committee for Future International Horticultural Congresses.

GEORGE F. WALDO spent the latter part of June at the Coastal Plains Experiment Station, Willard, North Carolina, where he selected promising raspberry seedlings.

J. S. COOLEY and J. H. CRENSHAW attended the meeting of the Pacific Division of the American Association for the Advancement of Science at Eugene, Oregon, June 18 to 20, conferring with cooperators and growers and discussing plans for future work. Dr. Cooley presented a paper on chemically treated wraps for the control of Botrytis rot of stored apples and also read a paper by himself and P. W. MILLER on experimental production of perennial canker of the apple and some conditions favoring natural infection. Dr. Crenshaw offered a paper discussing measuring duration of effectiveness of Bordeaux sprays to perennial canker spores. T. P. DYKSTRA also attended the meeting.

C. O. BRATLEY visited Thomaston, Georgia and other points in the State in connection with the starting of shipments of peaches for test studies. Previously he had made a trip from North Carolina to New York and Pennsylvania, studying dewberry diseases under shipping conditions.

J. I. LAURITZEN and S. P. DOOLITTLE were recent visitors at the Market Pathology Field Laboratory, located in the department of botany of the University of Chicago at Chicago, Illinois. Dr. L. E. Melchers of Kansas, also visited the laboratory in June.

A. G. GALLOWAY has been visiting points in Georgia, New York and Pennsylvania, conducting investigations on the transportation of peaches under different methods of refrigeration.

P. M. LOMBARD writes that hot weather has prevailed in the Presque Isle section since early June, with few local showers except on June 17-18, when some two inches of rain fell. Crops have made very rapid growth and conditions are considered excellent for this time of the year. "We began transplanting 4,500 seedling potatoes on June 16 to our isolation plot," he writes.

CHARLES DRECHSLER has been visiting points in Massachusetts to make collections of Phycomycetous parasites on spinach roots. Most of his investigations were carried on at the Garden Truck Experiment Station, Waltham, Mass.

FREEMAN WEIR's left Washington June 20 for points in Oregon, Washington, California, Texas and Missouri, for an inspection of commercial plantings of ornamental bulbs and other plants. He will arrange for conferences with the pathologists of the various scientific institutions and experiment stations in the regions visited.

WM. STUART attended the Thirteenth Long Island Potato Tours held in Nassau and Suffolk counties June 25-27, participating in informal discussions with growers and cooperators.

G. W. KEITT is inspecting plantings near Middlebury, Indiana; Benton Harbor, Michigan; and at intermediate points to check up on the development and distribution of cane gall disease of black raspberries as compared to last year. He will collect fixed material for histological studies and secure living material for continued tests of this disease.

THE JOURNAL OF AGRICULTURAL RESEARCH for June 15, contains a record of studies of the staminate inflorescence and pollen of *Hicoria pecan* by J. G. Woodroof, associate horticulturist of the Georgia Agricultural Experiment Station.

J. R. WINSTON spent the latter part of the fiscal year conducting investigations on the precooling and transportation of dewberries, visiting points in Georgia, North Carolina and New York. He also made a trip to St. Paul, Minnesota to join an experimental testing trip of cherries, accompanying it to New York City.

Horticulture lost a rare friend through the death of Col. William Boyce Thompson at Yonkers, New York, on June 27. Even in death, however, he did not forget his love for plant studies and his friends announce that he had set aside \$10,000,000 to endow the Boyce Thompson Institute for plant research at Yonkers. This institute, founded six years ago, has already become known over the world for its studies of plant diseases, etc.

THE OFFICE OF HORTICULTURAL CROPS AND DISEASES

SEMI - MONTHLY NEWS LETTER

The Official Organ of the Office of Horticultural Crops and Diseases,
Bureau of Plant Industry, United States Department of Agriculture.

John A. Ferrall, Editor

This NEWS LETTER is for distribution only to employees of the Office and the material in it is of an informal and confidential nature and is not to be published without the prior approval of the Office of Horticultural Crops and Diseases.

Vol. II

Washington, D. C., July 15, 1930

No. 14

THE DESERT BLOOMS! FRANK A. THACKERY, agriculturist, visiting Washington for conferences with administrative officers in connection with work for the new Fiscal Year, reports that on the occasion of his last trip to inspection to the pest-free date plantings in Death Valley, conducted by this office, he had an opportunity to view the phenomena of flower blooming in this locality--with the thermometer registering the warm-welcoming figures of 121° F. on the day of his visit!

After a period of unusual rains during May, the burning sands of this "hottest spot on earth," proceeded to blossom out into an Arabian Night's blanket of colors. As THACKERY and his companion drove in to the Furnace Creek en route to the date planting they were able to find more than ninety species of more or less rare plants. The oldest inhabitants on the outskirts of this valley say that such flowering occurs about once each twenty to thirty years, which means that it is quite certain that these flower seeds have remained dormant for many years, awaiting only the rains to bring them out into the riot of color that has been commented on so widely in the newspapers during the past month.

Naturally, the phenomena was a delight to the botanists who managed to reach Death Valley in time to see the flowers. The SAN ANTONIO NEWS reports one botanical investigator as having picked more than one hundred varieties in less than thirty minutes--asters, flowering grasses, larkspur, woodsorrel, lilies, bluebells, geraniums, daisies, poppies, paintbrush, buttercups, hedge mustard, cactus flowers, dandelions, columbines, etc., etc.

Death Valley is said to have received its name as the result of the melancholy fate of a party of immigrants who, about 1850, perished from thirst within its limits. It is a region of intense heat, probably the hottest place on earth, with a considerable part of its surface one hundred feet or so below sea-level. Ordinarily it has a fraction of an inch of rainfall each year, with a blazing sunshine that routs all living things except a few horn toads, lizards and snakes, and these appear to seek other quarters during the hottest months of the year. It was originally a part of the sea and then the bed of a lake. Geologists place its age at somewhere around ten million years.

There are parts of Death Valley, of course, where many varieties of plant life are to be seen. In the heart of the valley one finds the Furnace Creek Ranch, which has continued to live and prosper for many years. It was at this point that WALTER T. SWINGLE, principal physiologist, seeking a place to start a small planting of date offshoots where they would be completely isolated from other (and infected or infested) palms, established the first of the "pest-free" date palm plantings which the Office of Horticultural Crops and Diseases now maintains in the Southwest, to pave the way for a future source of supply of "clean" date palms.

The Furnace Creek Ranch is located a few miles into the valley from the mouth of Furnace Creek. There are now about 500 date palms growing at this ranch, with perhaps 100 of them beginning to bear fruit. DR. SWINGLE has a variety planting there, handled cooperatively, in which there are some 30 palms being tested. The other date palms are the property of the Furnace Creek Ranch. To get to this interesting place, THACKERY headed first for Death Valley Junction, then passed through the Funeral range of mountains and down Funeral Creek to Death Valley--a collection of names rather descriptive of the region.

The first bulletin of the Weather Bureau discussed this region: Notes on the Climate and Meteorology of Death Valley, California, by Mark W. Harrington, Chief of Weather Bureau; Weather Bureau Bulletin No. 1, issued in 1892. This publication mentions the fact that the temperature is said to have reached as high as 137° F. in the shade in Death Valley, and points out that meat slaughtered at night and cooked was spoiled by next morning; and that the same meat if cut thin and dipped in brine could be cured in the sun in an hour. A writing desk curled, split, and fell apart; tables warped into curious shapes; a chair fell apart. Water barrels incautiously left empty soon lost their hoops. It is not surprising that a writer says "Names like Hell's Gate, Dante's View, Funeral Mountains, Poison Spring, give hints of the early American visitors' impressions of Death Valley--that is, the impressions of those who came out alive."

From this sketch it would appear that any one seeking a region for an isolated test of plants could scarcely find a better situation than Death Valley--if the plant is the kind that will grow there, and the date palm seems to thrive at Furnace Creek Ranch. The need for such "pest free" date plantings arises from the fact that imported date palms bring with them dangerous insect pests which are proving expensive to eradicate, though the campaign for eradication appears to be well on the way to success. In order to prevent the spread of these insect pests, uncertified date offshoots are not allowed to move interstate from a restricted district including parts of five counties in southeastern California and southwestern Arizona and one county in Texas.

Methods of treatment have been worked out that under favorable conditions provide clean offshoots. If these clean offshoots, freed from all insect pests by the rather drastic eradication treatment, can be set out in such isolated valleys, with proper care and proper protection by quarantine regulations, they will stay free from insect enemies, and a pest-free date region will thereby be established producing pest-free offshoots that can be shipped to all parts of the United States where dates can be grown. The oldest and largest of these pest-free plantings is, as stated, that in Death Valley.

While this arrangement is proving very satisfactory so far as paving the way for a supply of clean date offshoots is concerned, it is rather trying on the employees who must supervise the tests. One of our men from the U. S. Experiment Date Garden at Indio, California, who did some of the preliminary work in connection with the establishing of the Death Valley palms, reported that on one or two trips his neck was practically cooked where the sun hit it; and that he had actually seen birds fall from the sky dead, killed by the intense heat of Death Valley.

Yet it is of this spot that a correspondent to the St. Louis GLOBE-DEMOCRAT writes: "Death Valley's wastes of burning sand have become blankets of thick purple. It appears to be one of Nature's wasteful gestures, for we must believe that the millions of plants of all description have been made to blossom only that they may die under the suffocating heat that is probably already upon them. It is reasonable to suppose that they will wither away even before they can reproduce their kind, for May showers in Death Valley may be easily forgotten in June. The remarkable factor in this blooming of Death Valley is where the seed that a few days of rain brought into life came from--myriad varieties of seeds that apparently had lain dormant for many years. Every sand dune and every bare butte must have held their secrets for unestimable seasons."



FRUIT CONSERVATION. The DAILY DIGEST comments on the fact that a recent survey by a large commercial organization interested in fruit sales shows that close to 75 per cent of all American women still put up jams and jellies. The survey revealed that 88 per cent of farm women, 78 per cent of village women and 45 per cent of large-city women put up home-made jams. Housewives are jelly makers on 98 per cent of Pacific coast farms, on 93 per cent of southern farms, on 86 per cent of Middle West farms, and on 74 per cent of eastern farms. The survey brought out that farm women are more concerned with quality than speed, ease or cost of making. Fruit preferences run as follows: 53 per cent of farm and village women put up apple jelly; 50 per cent, grape; 49 per cent, strawberry; 45 per cent, blackberry. Plums are more popular on farms than in cities.

Apple, the favorite among the farm women, ranks fourth with city women while the blackberry is just the reverse. Grape jelly and jam are second with both groups. Farm and village women report putting up half again as many kinds as city women. Grape is the Midwest favorite along with strawberry. Farm women report putting up an average of 12 glasses of peach and currant jelly a year.

Only 9 per cent of the farm women reported that they had stopped putting up jellies and jams; and only 28 per cent ever buy jam or jelly and of these but 21 per cent buy until the home supply gives out.

These products are served by 94 per cent for breakfast, by 57 per cent for dinner, and by 28 per cent between meals. Jelly is even made in winter by some farm women, 14 per cent indicating that they use dried or canned fruits at that time of the year for this purpose.

HORTICULTURAL PROGRESS. The growing popularity of horticultural products is shown by the marked change in the food habits of the American people. It now takes 63,000 carloads of fresh fruit and vegetables to feed Boston for a year. This is in addition to what the Massachusetts growers produce and take into Boston by truck. "Twenty-five kinds of fruit and 38 kinds of vegetables are consumed in Boston in sufficient quantity to be taken in in carload lots. In fruits, bananas lead with 8,823 carloads; oranges total 5,597 carloads; grapes, 4,500 carloads. The fourth position in Boston is held by the apple, with 2,680 carloads. Massachusetts itself is now supplying more than one-half the apples used in Boston....The State of Washington sent seven carloads of raspberries to Boston in 1929."

Perhaps the most striking illustration of the change in food habits, however, is the fact that a summary of this sort concerning Boston gets along without a single mention of beans!

AGRICULTURE

The Department's DAILY DIGEST for July 3 printed the following: An editorial in the Washington (D.C.) Post today says: "Secretary Arthur M. Hyde's study of the relation between the tariff and agriculture is both interesting and instructive. His radio address on the subject leaves no doubt as to the benefits to be derived from the new schedules by the American farmer. The tariff aims to reserve the domestic market for American producers. It is applicable, Secretary Hyde estimates, to agricultural imports valued at more than \$620,000,000.00. The duty on some crops that are produced in surplus quantities may not be effective, but the new rates as a whole will tend to diversify crops and balance production against demand.

"Secretary Hyde's close analysis exposes the fallacy that benefits to the farmer will be offset by increased duties on articles he must buy. The percentage of increase on agricultural products is 54.43, while the increase on all items covered by the bill amounts to but 6.17 per cent. Few items that figure largely in farm budgets are allowed increased duty, except such products as one farmer sells to another. 'Fifty per cent of the American farmer's purchases,' says Secretary Hyde, 'is for commodities produced by American agriculture.' About 39 per cent of his expenditures is for commodities on the free list. This leaves only 11 per cent of his expenditures for commodities which have a tariff and in which he is not interested as a producer.'

"Assuming that the agricultural duties are effective, the average income per farm should be increased by approximately \$150.00 annually under the new law. Average expenditures per farm, Secretary Hyde estimates, would be increased about \$48.00. This would leave the average farmer a net benefit of \$102.00 per year from the tariff bill. Varying conditions in the domestic market would necessarily alter this concrete representation of the tariff law's value to the farmer. But they leave no question that the farmer is in a stronger position today than before enactment of the tariff bill. In the language of Secretary Hyde, 'It now lies in the power of agriculture to take the final step toward achieving economic equality!'"

CONTRACT LET FOR
NEW BUILDING.

Details have been completed for the erection of the first of the "extensible" office buildings to be used by the Department at Washington. This is to be erected on the square just back of the main building--bounded by Thirteenth Street, Linworth Place, B and C. Streets. The contract was awarded the Nelson-Pedley Company of Philadelphia, lowest of 24 bidders, at \$2,074,000, for a building with terra cotta exterior trim. Bids were also asked and received for using some marble, but the terra cotta trim was finally decided upon. The work of tearing down the old buildings now on the square is expected to start soon. This is really the first unit of the "extensible" building which will cover three blocks and be connected to the present administration building by bridges overarching the street.

PRESQUE ISLE, "Since the last date of writing," says a note from
MAINE. CHARLES F. CLARK, associate horticulturist, now working
at the Presque Isle station, "the foreign potato var-
ieties, i.e., the sprouts which were shipped from the Plant Quarantine
House, have been set out in the field. The total number of plants was
944. A large percentage of the sprouts which we received lived. This
seems to be a very good method of handling the foreign material which
needs to go through quarantine.

"We have also transplanted in the field the new potato seedlings
which were started in the greenhouse this spring. The total number
set out was 4,562. The plants were large and vigorous and should grow
rapidly as soon as they become established.

"Conditions have been very favorable for the growth of crops so
far this season. During the month of June the weather was unusually
warm for that time of the year. This condition, combined with an
abundant rainfall, which was 4.21 inches for that period, resulted in
a very rapid growth of the plants during the early stages of develop-
ment. Because of the early planting and favorable conditions the
potato crop is at least a week or possibly ten days farther advanced
than it has been at this time in recent years."

ADMINISTRATIVE NOTICE:

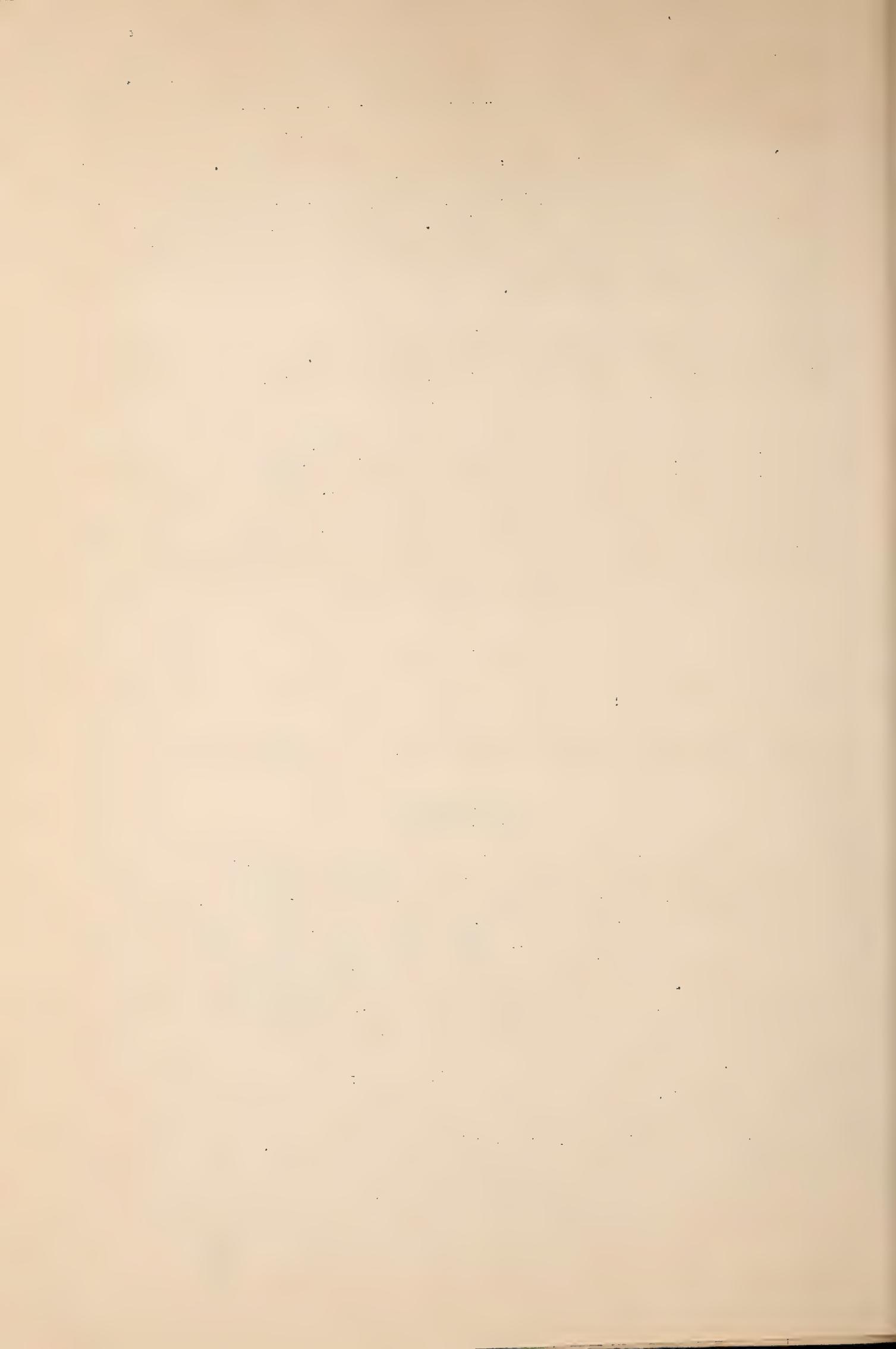
The following piece of property is available for transfer to
any one having need for it:

REFRIGERATOR

Description of this refrigerator is as follows: It has
three compartments, two of which were used exclusively by
our Laboratory of Plant Pathology for the storing of cultures.
Its outside measurements are--33 inches wide, 28 inches deep,
six feet and one-half high. The upper compartment, which is
for ice, measures 23 inches wide by 21 inches deep and 17
inches high. The center compartment is 20 inches deep by 27
inches wide by 17 inches high. The lower compartment is 21
inches deep by 27 inches wide by 22 inches high.

All three doors leading to the compartments open from
the left side.

The ice capacity is approximately 180 pounds.



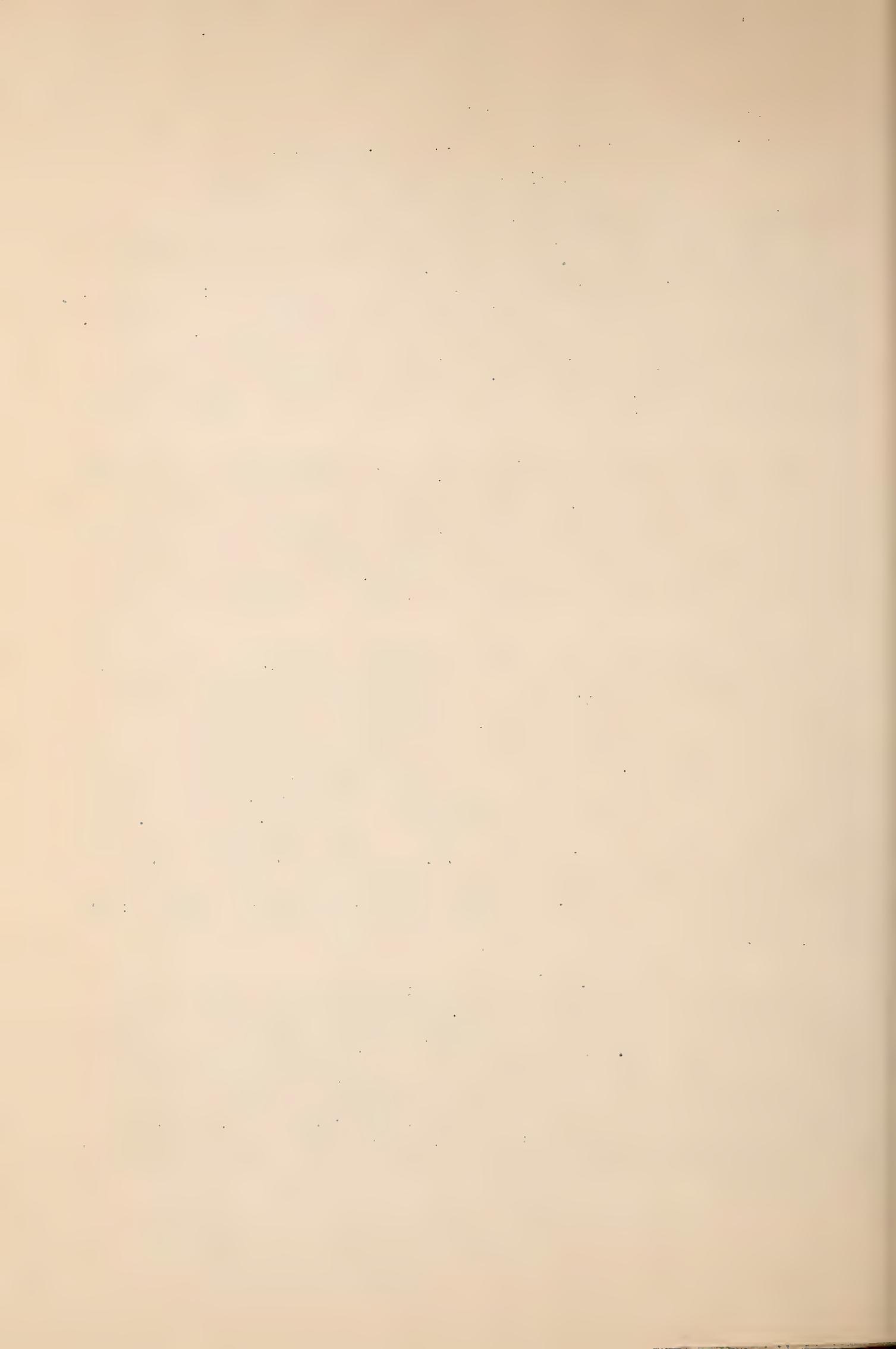
EDITORIALLY SPEAKING. John A. Ferrall

GOOD ENOUGH FOR JUICE! A popular story of my boyhood concerned an old Jewish lady of our neighborhood who visited the corner grocery store in search of lemons. The grocer's stock was very low and the fruits remaining on hand rather unattractive in appearance. "They are good enough for the juice," he said, trying to make a sale. To his amazement the old lady showed signs of high indignation and stamped out of the store, exclaiming: "I want you to understand that the Jews are as good as anybody." It was not until some minutes had passed that the grocer grasped the fact that she had confused the words "juice" and "Jews."

The growing popularity of fruit juices is opening a splendid and profitable outlet for fruits merely "good enough for the juice." The fact that the American public spent something like \$725,000,000 for soda fountain drinks alone in 1929, appears to indicate that there is plenty of room for an expansion of the fruit juice industry. This does not include the general bill for sodas, soft drinks, luncheons and confectionery sold over the soda fountains, you understand, but merely beverages.

In a contribution to the NATIONAL REPUBLIC MAGAZINE last year, Secretary ARTHUR M. HYDE touched upon this fruit utilization development as a form of our utilization of agricultural by-products, since it can make use of off grade fruits. "In the case of many of the fruits," he said, "the good, sound fruits among the off grades are, with good management, processing, and salesmanship, finding great outlets in the form of pure crushed-fruit beverages, jams, jellies and preserves, and as ingredients in confections, candies, ice cream, etc. People buy pure fruit juices as beverages in great quantities and pay well for them when they can get them.....the beverage possibilities of fruit juices are illustrated by the fact that one concern pays in one of our large cities \$1,000 a month rent for a single business room in which to serve the pure juices of the orange, lemon, grapefruit, lime, etc."

Then, too, these by-product utilization studies open the way for the utilization of excess production, and over-production will always be something to worry about in a country so able to produce in quantities. The late Dr. J. H. Ross, speaking of the adaptability of Florida for producing large crops of citrus fruits, is credited with saying that he was rather glad of obstacles--the fruit fly, citrus canker and the like--adding, "If it were not for some difficulties intervening, the whole population of the United States would be down here in Florida growing oranges and grapefruit--and then where would our consuming public be?"



IN A LIGHTER VEIN

GARDEN NOTES.--According to one of our investigators, while father and mother were looking over the home garden, their tiny daughter was making some observations of her own.

"Oh, mother!" she suddenly cried out. "Here's a little green snake!"

"Keep away from it, darling," cautioned the mother. "It may be just as dangerous as a ripe one."

SUMMER FLIRTATIONS.

The radish whispered to the bean,
As shy as shy could be:

"Please go away, I think you're mean--
You're only stringing me!"

NO DUCKS.--The green snake lady must have been the same one who wrote to the editor of a farm journal to know how long it took eggs to hatch. "Three weeks for chickens; and four weeks for ducks," he wrote her.

Several weeks later he heard from her again.

"Thank you very much for your information," she wrote. "However, at the end of three weeks there were no chickens; and as I did not want ducks, I took the hen off."

GUMMED UP!--It was at a community dance and the Chairman noticed a man down on his knees in the middle of the dance floor apparently searching for something. He went over to investigate.

"Have you lost something?" He inquired.

"My chewing gum," said the man on the floor, rather thickly.

"Oh, don't bother about it," laughed the Chairman. "Of course it will stick to some one's shoe but that doesn't matter--and you are interfering with the dancers--"

"I know, I know," mumbled the man on the floor. "But, you see--my teeth are stuck in that gum!"

SCIENTIFIC EXPLANATION.--The inquisitive young thing had rather irritated the scientific worker by her innumerable questions. Finally she picked up a beet. "Why," she wanted to know, "is the beet red?" "I believe," replied the investigator, with a perfectly straight face, "it is because it saw the lettuce dressing."

NOT EXACTLY WHAT HE MEANT.--A florist, putting an advertisement in the local papers just before "Mother's Day," was rather stunned when he happened to see the way the printer had set it up: SEND MOTHER A GIFT OF HARDLY EVER-BLOOMING ROSE BUSHES!



PERSONAL MENTION

The Office was well represented at the meeting of the Northwest Horticulturists, Entomologists, and Plant Pathologists at Medford, Oregon, July 14-16, among those in attendance being H. C. DIEHL, J. S. COOLEY, E. S. SCHULTZ, C. P. HARLEY, E. V. SHEAR and E. L. REEVES. DIEHL presented two papers, the first (with EZELL) on the frozen pack of fruits and vegetables, and the second (with RYALL) on the removal of spray residue. HARLEY and REEVES presented a paper on their further observations of the rot of apples.

CHARLES BROOKS visited New York City early in July for conferences regarding the marketing pathological investigations.

JOHN C. DUNEGAN went to Vincennes, Indiana, early in the month to confer with L. PIERCE and to examine bacterial spot experiments, later coming to Washington for conference with JOHN W. ROBERTS. ROBERTS and DUNEGAN are planning a joint bulletin on peach brown rot.

GEORGE M. DARROW has been making a tour of Alabama, Texas, California, Oregon, Washington, Minnesota, Louisiana and Michigan to study thornless sports of the Young Dewberry, to make strawberry selections and to study strawberry varieties.

WALTER T. SWINGLE, who has been in Washington for some weeks conferring with Bureau officials concerning work for the new fiscal year, has returned to California.

L. L. HARTER has returned to Washington from a brief trip to nearby points in Maryland where he has been conducting investigations on bean diseases.

E. A. GORMAN left Arlington Farm early in the month for a trip to South Carolina, New York and other points to conduct investigations on the pre-cooling and transportation of vegetables. The trip is being made in a government-owned truck.

FRANK A. THACKERY left Washington July 5 for his permanent station at Los Angeles, California, to take up his general field investigations in the Southwest. We hope he will not fail to report to DEWEY MOORE at Indio that he spent the afternoon of July 4 watching the Washington baseball team win two games from the New York Yankees--Babe Ruth and all!

In "The Home Production of Onion Seed and Sets," issued as Farmers' Bulletin No. 434 (revised), W. R. BEATTIE notes that by growing his own seed the onion grower can secure strains better adapted to his particular conditions than by using seed bought on the general market.



The grower can also select a few bushels of mother bulbs from his entire crop, thus enabling him to save seed from choice specimens, while the commercial seed grower uses almost the entire crop for seed production.

ERSTON V. MILLER made a short trip to points in Maryland and Virginia to secure samples of fruits and vegetables for a study of the effects of carbon dioxide in storage. He also made a general investigation of fruit diseases on this trip.

E. H. MILSTEAD has gone to the Presque Isle, Maine, station where he will spend the summer months assisting in the potato breeding and improvement studies.

T. M. WHITEMAN left Washington late in June for trips to various points in Georgia, etc. in connection with investigations on the transportation of peaches under different conditions.

B. G. SITTON attended the meeting of the Louisiana Pecan Growers' Association at Lafayette, Louisiana, on July 4, reading a paper entitled: "How the Shreveport Station can help the Texas Grower."

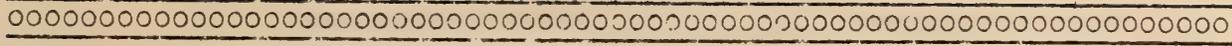
LAURISTON C. MARSHALL came to Washington from Princeton, New Jersey (where he has been working in the Palmer Physical Laboratory at Princeton University) for a conference regarding experiments being planned for the testing out, in cooperation with the Smithsonian Institution, of the effects of radiant energy especially as applied to the propagation of plants under controlled conditions of temperature and humidity.

J. R. WINSTON is on a trip in a Government-owned truck to points from North Carolina to New York in connection with his investigations on the pre-cooling and transportation of peaches.

DR. AUCHTER made a short trip to points in Maryland and West Virginia late in June to confer with members of the staff and to conduct investigations on the relation of Moisture supply to apple production.

W. W. ALDRICH is planning short trips to points in Maryland, Virginia and West Virginia during the next four months to conduct investigations on the factors influencing the regularity of bearing in apples.

DEWEY MOORE, writing from Indio, California, under date of June 30, reported that splendid progress had been made on the new well at the U. S. Experiment Date Garden. It was then down 286 feet, and finding plenty of water.



THE OFFICE OF HORTICULTURAL CROPS AND DISEASES

SEMI - MONTHLY NEWS LETTER

The Official Organ of the Office of Horticultural Crops and Diseases,
Bureau of Plant Industry, United States Department of Agriculture!

John A. Ferrall, Editor

This NEWS LETTER is for distribution only to employees of the Office
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is not to be published without the prior approval of the Office of
Horticultural Crops and Diseases.



Vol. II

Washington, D. C., August 1, 1930

No. 15

KEEN INTEREST IN POTATO WORK. W. STUART, senior horticulturist, who attended the Long Island Potato Tour, which was held June 25-27, reports a good attendance of growers and a keen interest in the "Source of Seed Demonstration Plots." As in previous seasons the tour was held in Nassau County on the 25th and in Suffolk County on the following two days.

The general condition of the potato crop in these two counties was found to be excellent, with every prospect of a most satisfactory yield. There had been a slight shift in acreage from Green Mountain to Irish Cobbler. This shift was undoubtedly due to the evident belief on the part of the growers that the early crop would bring better prices than the late crop. The substantiation of this belief is largely dependent on the size of the late crop.

In the seed source demonstration plots, there were only a few instances in which certain samples of seed stock contained an intolerable percentage of mosaic, leafroll or spindle tuber. The general quality of the seed stock planted by the commercial growers seemed to be better this season than on any of the previous visits of Dr. Stuart. Generally speaking, the crop was further advanced, this being particularly true with respect to Nassau County conditions.

An interesting innovation occurred just before the party left the Nassau County Court House at Mineola, when Governor Roosevelt of Porto Rico favored the tour with a few remarks concerning Porto Rican agriculture and vouchsafed the information that Porto Rico was going to adopt the system of Extension Work in agriculture used in the United States. This new development is to become effective July 1 and is to be pushed as rapidly as competent county agents can be secured.

Other interesting and informative features of the tour were demonstrations of auto-truck sprayers with spray booms in front and in the rear of the truck, covering eight and ten rows with spray material at 350-400 pounds pressure per square inch, and moving approximately six miles an hour. Greater speed is, of course, possible, but not considered desirable. A number of those in attendance, particularly Experiment Station men, felt that a four-mile-an-hour rate of movement with a somewhat higher pressure would insure a better coverage and a larger application per acre with a consequent better protection against insect and fungus pests. The tractor-hauled power sprayer was also in evidence.

Inquiry developed the fact that a very large percentage of the Long Island potato acreage is now planted with certified seed. It is now rather unusual to see a poor field of potatoes resulting from the use of poor seed. One of the especial features of interest this season was a comparative test of high yielding seed strains from a number of States, conducted by the New York Agricultural Experiment Station on the farm of John McKay near Riverhead. This was of particular interest as it is a phase of seed improvement work to which this office has given considerable attention.

MARYLAND AND VIRGINIA CROPS. The condition of the potato crop in Northhampton and Accomac Counties, Virginia, and Worcester County, Maryland, on June 19 and 20, as judged by previous visits at approximately the same time indicated a much smaller crop than usual.

This observation was based on the size of the plants and set of tubers. A shortage of moisture was largely the inhibiting growth and yield factor. The quality of the seed used as judged by the uniformity of the plants, percentage of stand, and freedom from disease, indicated a very marked improvement in the character of the seed produced by the growers of seed potatoes in the North.

Thursday, June 19, was devoted to inspection of seed sources and fertilizer demonstration plots in the the two Virginia counties of the Eastern Shore, and the following day to a similar study in Worcester County, Maryland.

Luncheon was served on Thursday at the Eastern Short Experiment Station, Onley, Virginia, after opportunity had been afforded for an inspection of the experimental potato investigations at the station. Following the luncheon there were brief addresses by Director T. C. Johnson, of the Virginia Truck Experiment Station, Mr. Porter Taylor of the Federal Farm Board, and Dr. Stuart.



The potato investigations at the station consisted of Irish Cobbler strain tests, irrigation studies, and fertilizer tests. The general opinion of growers and members of the Eastern Shore of Virginia Produce Exchange was that the 1930 early potato crop of that region would not average over forty barrels an acre, and that the increased acreage (from ten to twelve per cent) would just about offset the reduced yield per acre, thereby assuring about the same total output as in 1929.

Very similar conditions were noted in Worcester County, Maryland, on the following day. Seed source demonstrations were inspected on three farms, certified seed plots on one and on a fourth the effects of green manures and various forms of nitrogen, potash and phosphorous applications. A disease identification contest was also held in which potato growers recorded the number of plants affected with various virus diseases. Considerable interest was shown in this contest. Luncheon was served by 4-H Club members at the farm of F. J. Dukes & Bro., of Girdletree.

The influence of barnyard manure was well exemplified on this farm. An application of ten tons of manure per acre supplemented by about half the normal application of commercial fertilizer had resulted in an excellent growth of the plants, notwithstanding the low rainfall. This afforded a splendid lesson in regard to the value of a liberal supply of humus.

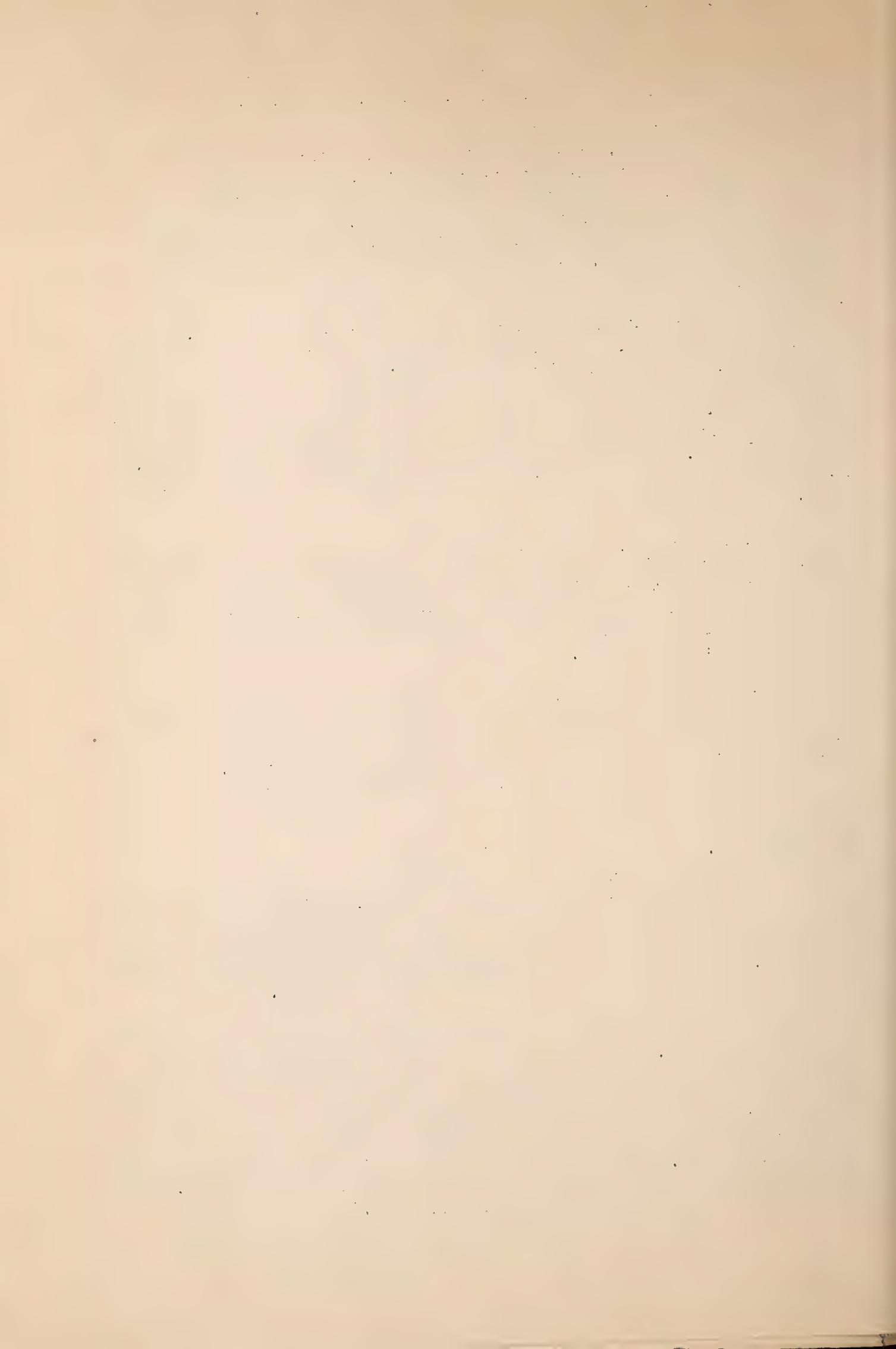
Perhaps the most interesting information gleaned on this trip was that concerning the production of late crop certified Irish Cobbler seed potatoes in Worcester County. A large proportion of the seed produced finds a ready market in northern New Jersey. It was also gratifying to learn that a large proportion of the early potato acreage of the Eastern Shore is planted with certified seed.

GREELEY, COLO.

POTATO STATION

"We have been having very hot weather in the Greeley district this year," writes W. C. Edmundson, horticulturist. "The temperature has been from 95 to 100 almost every day for the past three weeks. On July 13, we had .50 of an inch of rain and on July 20, .48. There has been somewhat of a water shortage this year and some of the crops have suffered from lack of moisture.

"Growers in the Gilcrest section began harvesting their early Ohios about July 7. Yields of early potatoes have been materially decreased this year by disease which may have been partly brought on by the extremely hot weather, and in many instances the yields will be cut in half. In some fields, it is believed, it will not pay to dig. The early crop in the Fort Morgan district has also been severely cut by the same trouble. Mr. Lawrence Shaw has been trying to isolate the organism causing this malady but up to date he has been unable to do so. The late crop of potatoes does not seem to be affected."



BUREAU OF PLANT INDUSTRY MEMO. 508

Precautions taken by members of the Bureau of Plant Industry in handling diseased plant material are believed to have been adequate for safeguarding any material distributed for herbarium purposes or for exchange with specialists of other institutions. With the increasing size of the Bureau and the great enlargement in volume of potentially dangerous material that is handled, it appears desirable to emphasize the importance of handling all material of this character with unusual caution. To insure uniformity of procedure, it is desired that the following instructions be brought to the attention of all members of your office likely to handle plant disease material or cultures of pathogenic organisms:

- (1) Importation into the Continental United States of specimens of living plants or parts thereof infected with transmissible diseases (including those of the so-called "virus" type) new to or not widely distributed in the United States or cultures of organisms involved in such diseases should not be made for any purpose except as specifically authorized by the Chief of Bureau.
- (2) Similar material originating in the Continental United States should be handled with the same precautions, except that this should not be construed to apply to diseased material intended to be shipped to Washington for identification.
- (3) Plant disease material in general should be handled in the laboratories with such care as to prevent the escape of pathogenic organisms and, after the preparation of any desired cultures or herbarium specimens, should be destroyed by incineration or steam sterilized or by immersion in 5 per cent formaldehyde or other effective agent.
- (4) Infections of living plants with diseases should be restricted to the plots, greenhouses or laboratories designated for such experimental work and when infected plant material from such experiments is discarded the same care should be exercised as in the disposition of any other infected plant material.
- (5) All living cultures of fungi and bacteria (in plates, tubes, flasks, etc.) upon being discarded should be killed by immersion in strong alcohol, formaldehyde, mercuric bichloride or other effective killing solutions; or by heating at temperatures sufficiently high to insure sterilization (15 pounds of pressure for 20 minutes or the equivalent).
- (6) Herbarium specimens of plant diseases new to or of restricted occurrence in the United States should be sterilized upon receipt by dry heat (100° C. for one hour as a minimum) or by soaking in alcoholic or aqueous solutions of mercuric bichloride or other disinfectants. All herbarium specimens of this class of material sent out to other institutions should be similarly treated.

July 10, 1930.



RENTAL OF GARAGES, ETC. In connection with the rental of garages, office rooms, etc., it should be remembered that such acts come under the same rulings covering ordinary purchases of supplies, or securing of help. Bids must be secured if the cost is to be \$50.00 or more. In the NEWS LETTER for January 1, 1930, page 5, mention was made of a ruling by the Comptroller General in the case of the Bureau of Agricultural Economics where a garage had been rented at \$5.00 a month. He held then that it was practicable to prepare specifications to cover the type of building needed -- location, space, fire protection, etc. -- and that there was no apparent reason why competition was not practicable. This means that we are obliged to secure bids in renting quarters for any purpose where the rental will be \$50.00 or more in any one year or for any period of rental which might overlap into two fiscal years.

All rentals, including rentals of buildings, garages, office rooms, typewriters, etc. NOT covered by lease, must be charged to letters of authorization and must be covered by the usual short-term agreement. The average letter of authorization explicitly prohibits rental, hence where any are contemplated a request must be made for an amendment to the letter to cover them, the amendment to be effective not later than the day such rental begins.

STEVENSON ACTING IN CHARGE OF THE PLANT DISEASE SURVEY. "Dr. Royal J. Haskell having been appointed Extension Plant Pathologist in the Office of Extension Work," says B. P. I. Memo 509, dated July 12, 1930, "Mr. John A. Stevenson of the Office of Mycology and Disease Survey will be acting in charge of the Plant Disease Survey until Dr. Haskell's successor is appointed. It is expected that the Plant Disease Survey position will be filled by transfer from another office of the Bureau about October 1, 1930."

LETTER TO THE EDITOR. "I beg to differ with you--I started to say that you were 'all wet'--on your statement on page 134 of the NEWS LETTER for July 15, to the effect that a lack of statistics on the consumption of beans in Boston is 'the most striking illustration of the change in food habits..'" writes W. A. Whitney, former editor of this great family paper. "For lo! these many years, beans and Boston have been regarded as synonymous, and in all truth, too! Therefore it is not surprising that the compilers of your data should assume that Boston takes nine (almost) out of every ten beans and, thus eliminating that factor, proceed to catalogue the minor crops consumer--fruits, vegetables, et cetera. There certainly is no change of Bostonian diet, I assure you."



GOULD ACTING IN CHARGE. The following memorandum for project leaders, in connection with Dr. Luchter's trip abroad, is self-explanatory:

"During my absence this summer, Mr. H. P. Gould, Senior Pomologist, will act in charge of the office. Matters which would otherwise be taken up with me should be referred to him for consideration.

All papers which would ordinarily be prepared for my signature are to be prepared for the signature of Mr. Gould, Senior Pomologist Acting in Charge. Otherwise there is to be no change in the handling of papers, everything being referred to this office as heretofore."

OUTSIDE COMPENSATION. The following letter from Dr. Taylor to Mr. H. H. Bellows in connection with a proposal made to certain members of the Bureau's staff who had contributed to the BOOK OF RURAL LIFE, outlines an important Bureau policy:

"My attention has been called, "writes Dr. Taylor, "to your form letter making inquiry as to whether Dr. _____ could undertake to answer questions relating to specific subjects in the field of his work through your organization when such questions are referred to him, and receive compensation therefor from your organization. I understand that similar letters have been received by a dozen or fifteen other members of the scientific staff of the Bureau of Plant Industry, who I understand contributed articles which were incorporated in the Book of Rural Life when it was published some years ago.

"In reply I would say that, while we are very glad to supply information desired by correspondents to the full extent that we have it available, this type of service is invariably rendered by our specialists to the public as a regular feature of their official work. To introduce the element of personal compensation would, I fear, result in misunderstandings on the part of the public as to the policy and practice of the Bureau in such matters, and accordingly we would not consider the acceptance of such compensation as advisable or proper. Neither would any agreement by our specialists to render special service of this character to individual citizens who make inquiries through a business organization be acceptable to the Bureau.

"Permit me to suggest that if such inquiries as relate to our field of work as may reach you from time to time are forwarded to the Bureau of Plant Industry they will receive prompt attention and be answered directly to the inquirers in the usual way. It occurs to me that in this way every desirable feature would be accomplished."



EDITORIALLY SPEAKING. John A. Ferrall

GRASS. A reader is curious as to whether grass may be considered a horticultural product. He has encountered Carl Sandburg's lines on "Grass" in his "Cornhuskers," and thinks they would be interesting to readers of the NEWS LETTER. Perhaps they would, and we may, I think, waive the question of grass' affiliation with Horticultural Crops and Diseases, (though it is a valuable tool for our landscape experts) as I rather suspect that the editorial page of the NEWS LETTER is tolerated merely as an outlet for things that would not be permitted anywhere else in the paper. Sandburg's lines are:

"Pile the bodies high at Austerlitz and Waterloo.
Shovel them under and let me work--
I am the grass; I cover all.
And pile them high at Gettysburg,
And pile them high at Ypres and Verdun.
Shovel them under and let me work.
Two years, ten years, and passengers ask the conductor:
What place is this?
Where are we now?

I am the grass.
Let me work."

Long years ago (in the KANSAS MAGAZINE for September, 1872), J. J. Ingalls had something to say about grass:

"Lying in the sunshine among the buttercups and dandelions of May, scarcely higher in intelligence than the minute tenants of that mimic wilderness, our earliest recollections are of grass, and when the fitful fever is ended and the foolish wrangle of market and forum is closed grass heals over the scar which our descent has made and the carpet of the infant becomes the blanket of the dead. Forests decay, harvests perish, flowers vanish, but grass is immortal. Belegued by the sullen hosts of Winter, it withdraws into the impregnable fortress of its subterranean vitality and emerges upon the first solicitation of Spring. Sown by the winds, by the wandering birds, propagated by the subtle agriculture of the elements which are its ministers and servants, it softens the rude outline of the world. It bears no blazonry of bloom to charm the senses with fragrance or splendor, but its homely hue is more enchanting than the lily or the rose. It yields no fruit in earth or air, and yet should its harvest fail for a single year, famine would depopulate the world."



IN A LIGHTER VEIN

Be careful, little butter bean,
When you begin to sprout;
The cut-worms sure will get you
If-you-don't--watch-out!

GUIDE POSTS.--The traveler, kept out until after dark, soon realized that he had lost his way. Then he came to a cross roads and tried to make out a sign nailed to the top of a post. He could not read it, and decided that he would have to climb the post and strike a match to see the directions. He did this and holding on to the top of the board with one hand he struck a match and looked. There it was in crude but legible characters: WET PAINT.

EVOLUTION?

"Where did I come from?" asked the rosebud.
"Why, the Stalk brought you," said the rose.

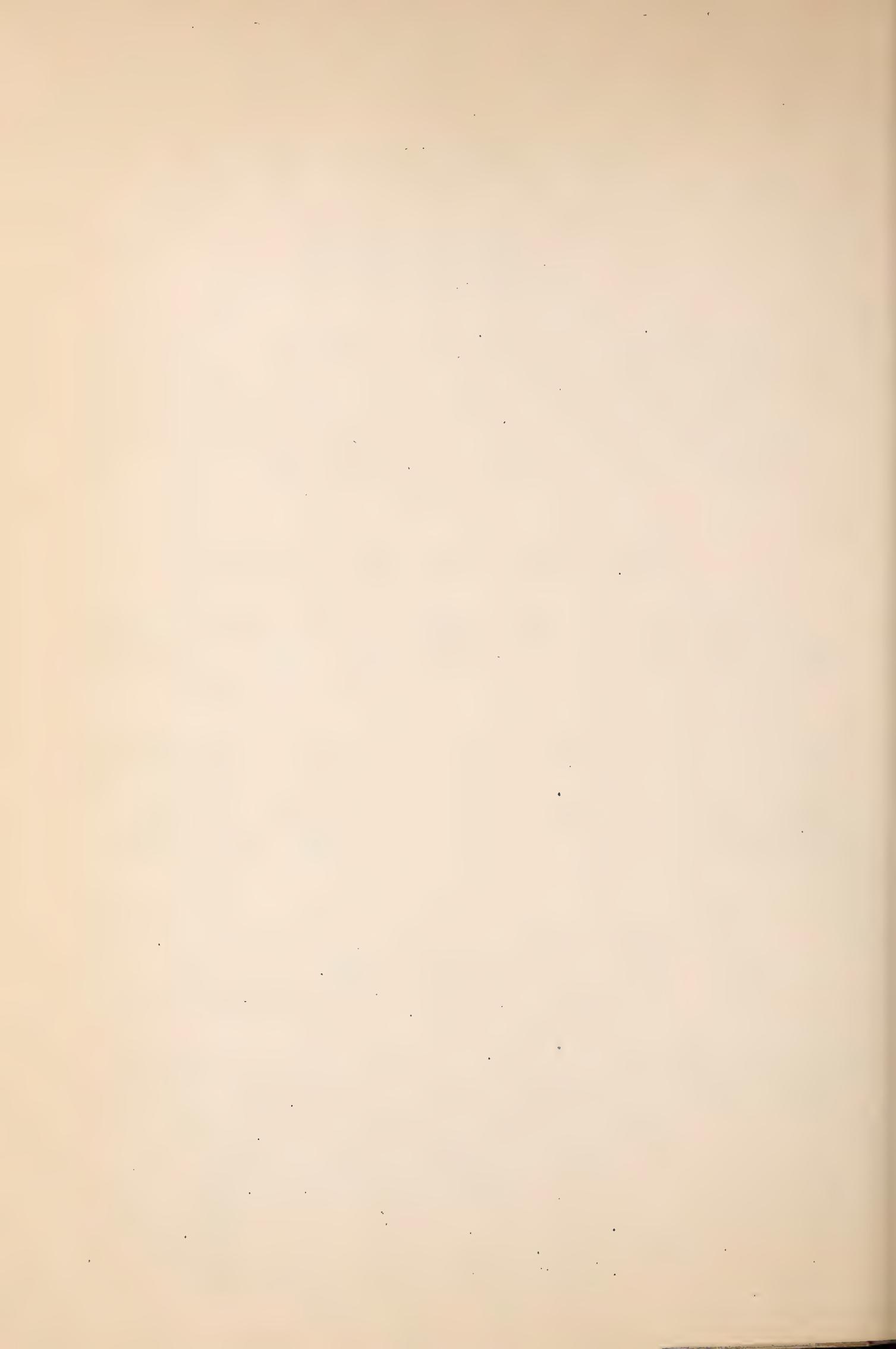
THE VALUE OF MONEY! Being somewhat subject to attacks of acute indigestion, one of our workers makes it a rule to take a few small mustard plasters along with him on his trips. After a recent experience, however, he is wondering whether this is necessary.

The first night out he thought he recognized the symptoms of an approaching attack and reaching out in the dark of his Pullman berth he felt for the plasters and securing one, placed it where he thought it would do the most good. Immediately he felt better and soon dropped off to sleep. When he went to remove it the following morning, however, he found it was not a mustard plaster which had given him such prompt relief. He had used a dollar bill by mistake!

FARM NOTE

"Where did you say you saw him milking the cow?"
the Judge wanted to know.
"A little beyond the center, your honor," said the
witness, promptly.

WONDERS OF MODERN INVENTION.--The lady of the house, occupying her summer cottage, had picked up a jewel of a house girl, just from the old country. The girl had one defect, however. She was hard to get up in the morning. Finally the lady of the house purchased an alarm clock and presented it to the girl. "You know," she said, "that we must have the fire lighted and breakfast started about seven, if the Doctor is to get to the Department in time. So, I have bought this." The girl examined it with interest. Quite evidently she had never seen one before. "Thank you, ma'am," she said finally. "It's very pretty." Then, however, she had to give way to her astonishment. "But fancy," she said, "fancy a thing like that being able to light



PERSONAL MENTION

At the small fruit meeting held July 16 at New Brunswick (and other points in New Jersey) the office was represented by Waite, Darrow, Waldo, Wilcox and N. E. Stevens. Dr. A. G. Plakidas of the Louisiana Experiment Station, who, under a cooperative agreement with the office, is spending the summer in the Falls Church Laboratory studying the diseases of strawberries, also attended the meeting.

R. B. Wilcox drove to Washington July 23, with several crates of cultivated blueberries for cold storage tests. This rapidly expanding industry has reached the stage where cold storage during the peak of the season is being considered, so that the sooner accurate information on the best storage conditions for the fruit is obtained, the better. One interesting side line developed in connection with the tests Wilcox is making of the keeping quality of blueberry varieties is his work in cooperation with the Japanese Beetle Laboratory. The entomologists are testing certain gases as a means of making the fruit safe to ship outside the quarantine area, and Wilcox is trying to determine the effect of the treatment on the keeping quality of blueberries.

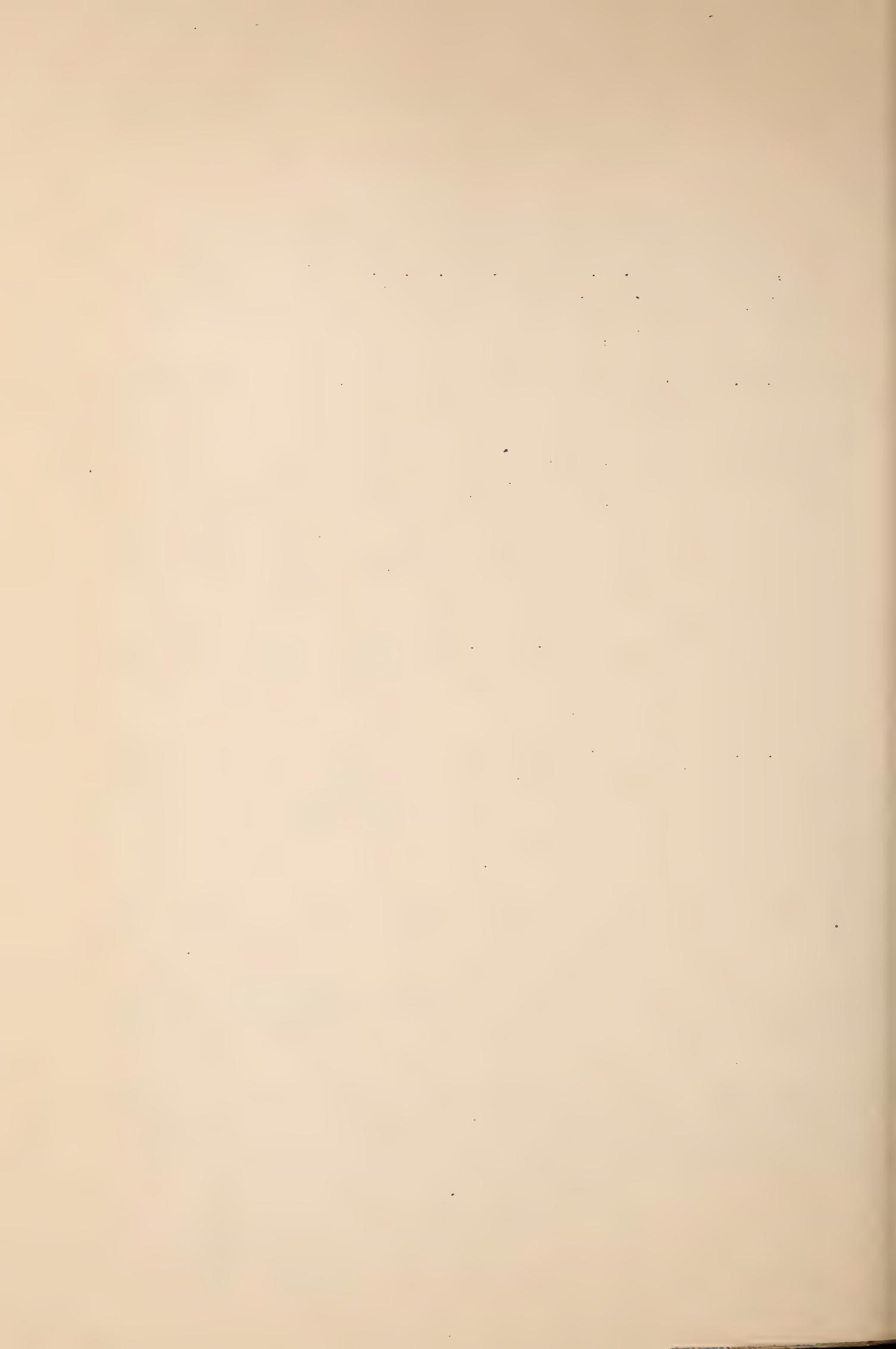
At last report, Paul V. Mook, who is making a survey for the dwarf disease of strawberries this summer, was in Arkansas. He reports that the dwarf disease is apparently less common in Tennessee than in the States farther north.

J. C. Walker has contributed (with Rose Smith, research associate in plant pathology of the University of Wisconsin) two papers to the Journal of Agricultural Research for July 1. The first deals with the effect of environmental factors upon the resistance of cabbage to yellows; and the second is a cytological study of cabbage plants in strains susceptible or resistant to yellows.

Lillian Cash made a trip to Buffalo, Detroit and points in their vicinity to locate bean fields infected with halo blight from which diseased seed may be obtained later, and to contract for seed.

Geo. M. Darrow is establishing temporary headquarters at Corvallis, Oregon, in connection with his investigations on small fruits and the establishment of work on small fruits at the cooperative field station, Corvallis, Oregon.

G. H. Rieman left Arlington Farm August 1, for a trip of approximately six weeks to points in Indiana, Wisconsin, Colorado, Montana, Idaho and California, to observe bean investigations and commercial operations; and to make selections and harvests of experimental bean breeding material in western states.



J. R. Magness visited Hancock, Maryland, late in July in connection with investigational work on the water relations, biannual bearing, and color development of fruit, and then started on a two-weeks' trip through the South to confer with workers in pecan and grape production. Geo. C. Husmann accompanied him to North and South Carolina and Georgia to make observations on viticultural problems.

L. B. Scott attended the meeting of the American Plant Propagators' Association at Minneapolis, July 15-17, and read a paper on "Budding roses in canes;" later coming to Washington for a general conference regarding work for the fiscal year.

L. L. Hertor is visiting Wisconsin, Colorado, Wyoming, Montana, Utah, etc. to investigate snap bean, field bean and lima bean diseases, and to arrange for an extension and enlargement of the bean work.

C. L. Powell is on a trip extending from California to Louisiana and to New York in connection with his investigations on the coloring and transportation of citrus fruits; while J. W. Lutz and R. L. Newton are visiting points in New York and New Jersey, checking up on experimental shipments of citrus fruits.

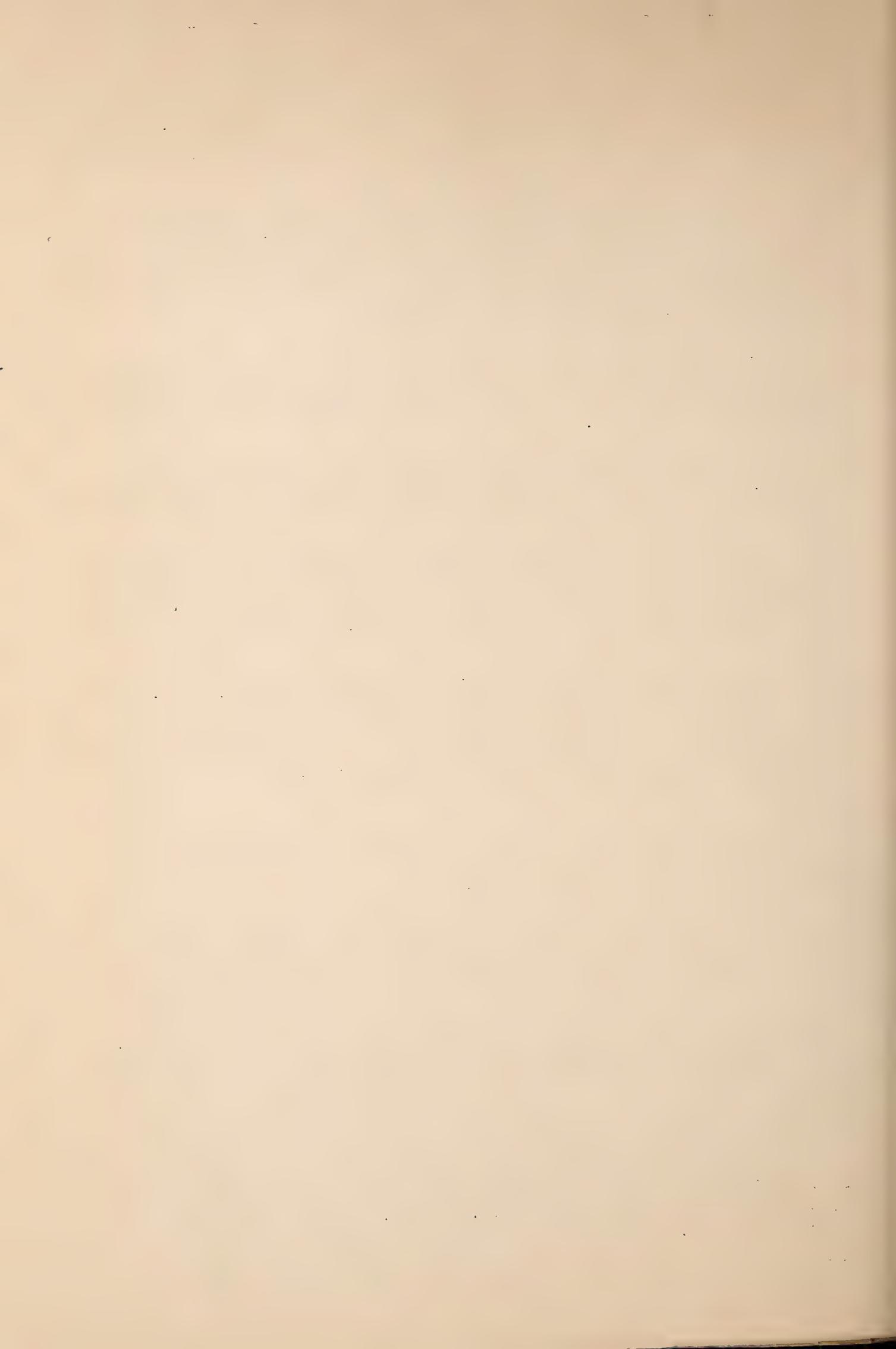
David Griffiths is the author of U. S. Dept. of Agric. Circ. 113, "Experiments with Hot-Water Treatment of Daffodils in Relation to Forcing and Field Culture," recording work carried on from 1926 to 1929, for the purpose of improving the health and vigor of daffodil stocks which have been grown at the U. S. Bellingham Bulb Station, Bellingham, Washington.

Florence Hedges left Washington July 17 for a trip to points in Connecticut, New York, etc. to make a study of bacterial parasites of the bean and their related organisms.

Two members of the staff of the office, S. C. Mason and A. D. Shamel, are represented in the April issue of the Journal of Heredity. Professor Mason describes a sectorial mutation of the Deglet Noor date palm, and Mr. Shamel tells of a bud variation of the same variety.

Congressman John W. Sommers, whose home is in Walla Walla, Wash., was a visitor at the Greeley station on July 17, and Mr. H. O. Werner, horticulturist of the University of Nebraska, on July 20.

The entire office staff, and especially those acquainted with Dr. J. S. Caldwell, will be grieved to learn of the death of his only son, Stuart, which occurred at 5 p.m. Sunday, July 27th, after a lingering illness.

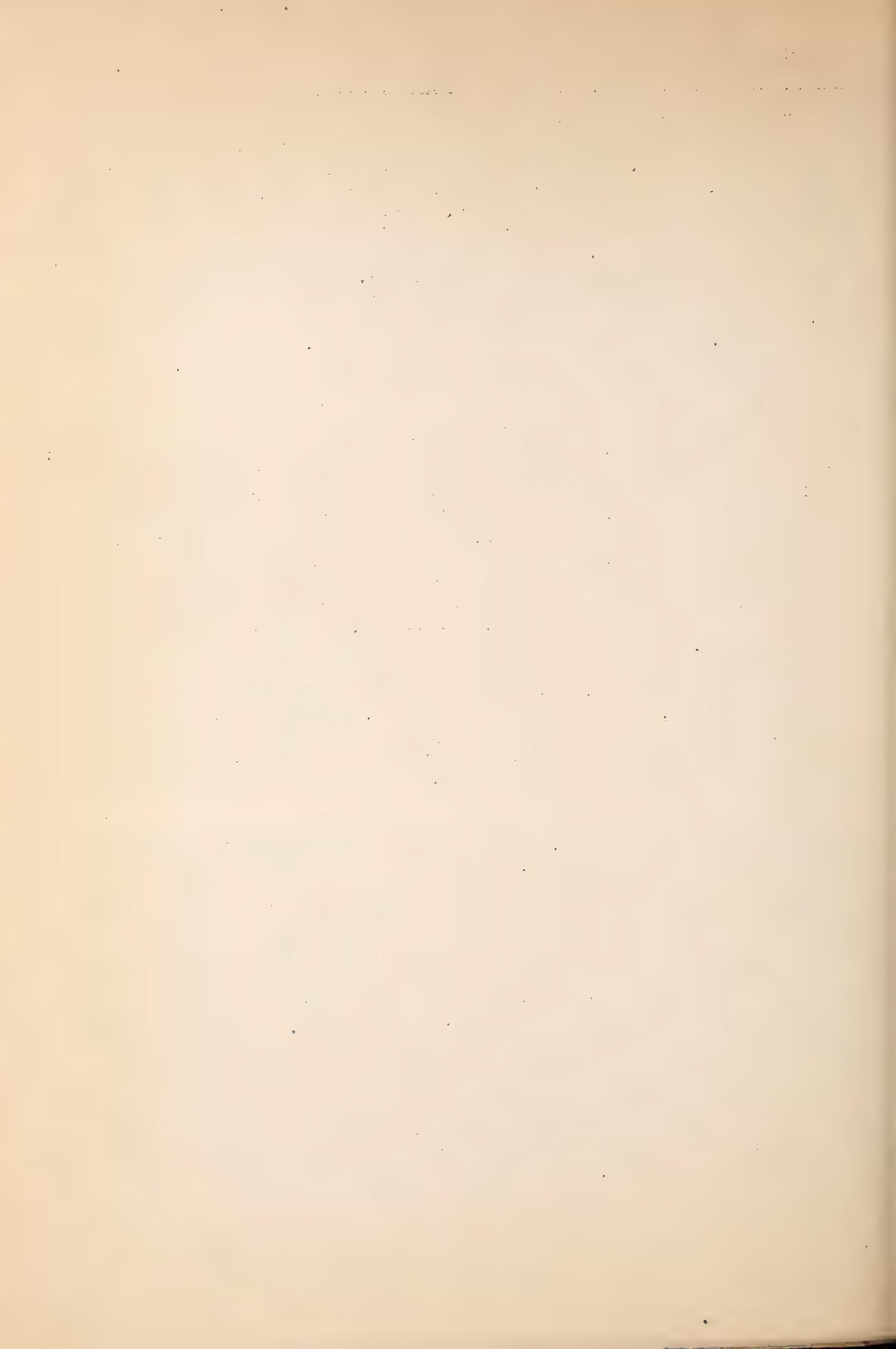




"The ideal farm garden consists of one-half acre, or more, of rich, well-drained land located near the house but where it will not be shaded, especially by trees. It does not make much difference which direction the rows run, except on sloping ground that will wash, and then the rows should be run crosswise of the slope. Wherever possible, the rows should be straight and the whole garden laid out in such a way that it can be cultivated with a horse. All permanent crops such as asparagus, rhubarb, strawberries, raspberries, blackberries, etc. should be located at one side of the garden where they will not be in the way of the annual plowing, but these crops should be so arranged that they may also be worked with a horse. Tall-growing crops like sweet corn, pole beans and okra should be planted where they will not shade the smaller crops.

"While earliness is important the main point is to keep the garden working right through the summer and until late in the fall. In certain of the Southern states, they have a slogan which runs something like this: "Have at least TWO fresh vegetables from your garden every day in the year!" This, however, does not prevent having three or more kinds from the garden at one time. The problem in the South is to keep the garden going during the hot summer months. In the colder sections where the growing season is short, it is all the more necessary to hasten production and to keep every part of the garden occupied throughout the growing season. This can be done first by making successive or follow-up plantings of several of the crops, and second, by the use of early and late varieties. Snap beans should be planted every two weeks during the early part of the season, and at least two late summer or early fall plantings should be made. Two or perhaps three spring plantings of peas, lettuce, radishes, and beets are recommended. In the central northern section, it is possible to make as many as five plantings of sweet corn during the season, two plantings of tomatoes and at least two plantings of carrots, summer squash, and cabbage.

"There are about twenty vegetable crops that may be considered important for the home garden, but a number of these are not adapted for growing throughout the country. For example, no southern garden would be considered complete without its patch of collards, and plenty of turnips for early greens, but collards are seldom grown in the North, and turnips must be harvested and stored before cold weather. Spinach is a form of greens that is deserving of greater attention by farm gardeners. A crop of spinach can be grown during the early spring and another in the fall, but it does not stand the heat of summer. New Zealand spinach stands the heat and makes fair greens. Swiss Chard is similar to garden beets, but makes good summer greens. Chinese cabbage may be grown to advantage as a fall crop and it is possible to store it like celery or cabbage, and use it until Christmas or later. Then there is the seven-top turnip which may be planted in the fall in mild climates, and makes excellent greens during the early spring. The green or branching forms of broccoli have recently gained favor as green vegetables and can be grown just like cabbage.



"After all, it is the standard vegetables such as beans, peas, corn, onions, beets, carrots, and tomatoes that are of most importance in our garden plantings, and the main point is to maintain an abundant supply throughout the summer, with plenty to store for winter use. When I was a boy, we went into the winter with our cellar filled with good things to eat, mostly from the garden, and I never recall going hungry--except, possibly, between meals!

"I realize that insects and diseases play an important part in lowering the production and quality of vegetables, and it is essential that we control these enemies of our garden crops. The methods of control constitute a long story, but the bulletins of the United States Department of Agriculture and of the various State experiment stations and agricultural colleges, give the latest and best methods of control.

"The thing I want to urge upon you, however, is that you give serious thought to the importance of having a good garden--one that will yield plenty of fresh small fruits and vegetables for home use. If there is anything to the report that the use of fresh fruits and vegetables adds years to one's life, let's have the benefit of this discovery--and at the same time enjoy good living."

CONTROLLING GARDEN PESTS. Apropos this matter of controlling garden pests, the Press Service of the Department is just now calling attention to the library of information about the pests and diseases of garden crops condensed within the covers of a 46-page bulletin issued by the Department.

"This 'pocket library' is Farmers' Bulletin 1371-F, 'Diseases and Insects of Garden Vegetables,' and has proved popular since it was first issued by the Department....

"Thirty diseases and 33 insect pests parasitic on 14 general garden crops are discussed in this bulletin. The principal diseases and insect enemies of asparagus, beans, beets, chard, cabbage, celery, cucumbers, muskmelons, squash, onions, peas, potatoes, sweet potatoes, and tomatoes are described and illustrated. The bulletin gives directions for controlling each pest and for making the fungicides and insecticides recommended for spraying or dusting the garden crops."



REPORTING USE OF PERSONALLY-OWNED AUTOMOBILES. Reimbursement for the use of personally-owned automobiles may not be made except where the letter of authorization specifically provides such authority. If your letter does provide for the use of a personally-owned automobile, note carefully the wording of the authority which is granted on a conditional basis that the use of the machine will save the Government money.

The General Accounting Office is necessarily exacting in its auditing of automobile claims. Its critical attitude is occasioned by the wording of the law which permits reimbursement of mileage for personally-owned automobiles: "Whenever the Secretary of Agriculture shall find that the expense of travel can be reduced thereby, he may authorize the payment of 7 cents a mile for an automobile used for necessary travel on official business." In order to comply with this, and with the terms of the letters of authorization, which are worded in accordance with the statute, it is necessary to show (1) either that the travel was to points which could not be reached by regular means of transportation, or (2) that it was more economical, considering both time and money expended, to travel by automobile at 7 cents a mile than to travel by train. For your information, the following quotations are made from suspensions made by the General Accounting Office:

"This account bears the following statement: 'Travel cannot be so advantageously performed otherwise than in personally-owned automobile.' This statement does not satisfy the requirement of the law. A statement showing what the expense of the trip would have been if made by rail, taking into consideration time, salary, and subsistence expenses, and showing that the means of travel used was the cheaper, is required.

"The travel stated on the foregoing voucher was performed between points in Massachusetts and other States which are accessible by train or trolley cars. An affirmative showing that the expenses of the above trips were reduced by the use of auto, in accordance with the Act of February 26, 1923, is required."

It will be seen from the above that the General Accounting Office considers that the use of a personally-owned automobile is only justified when it results in a reduction in the cost of travel, considering time and salary, subsistence and transportation expenses, the latter including both rail travel and automobile hire from the station to the point which is visited; the question of personal convenience or added efficiency not being considered when it is not possible to translate such into financial terms. It is essential therefore that automobile mileage statements indicate clearly whether travel was merely to points which are accessible by regular transportation facilities or to rural points not reached by such means; and a statement should be included showing why it was more economical to use the automobile, if travel was performed between points reached by regular transportation facilities.



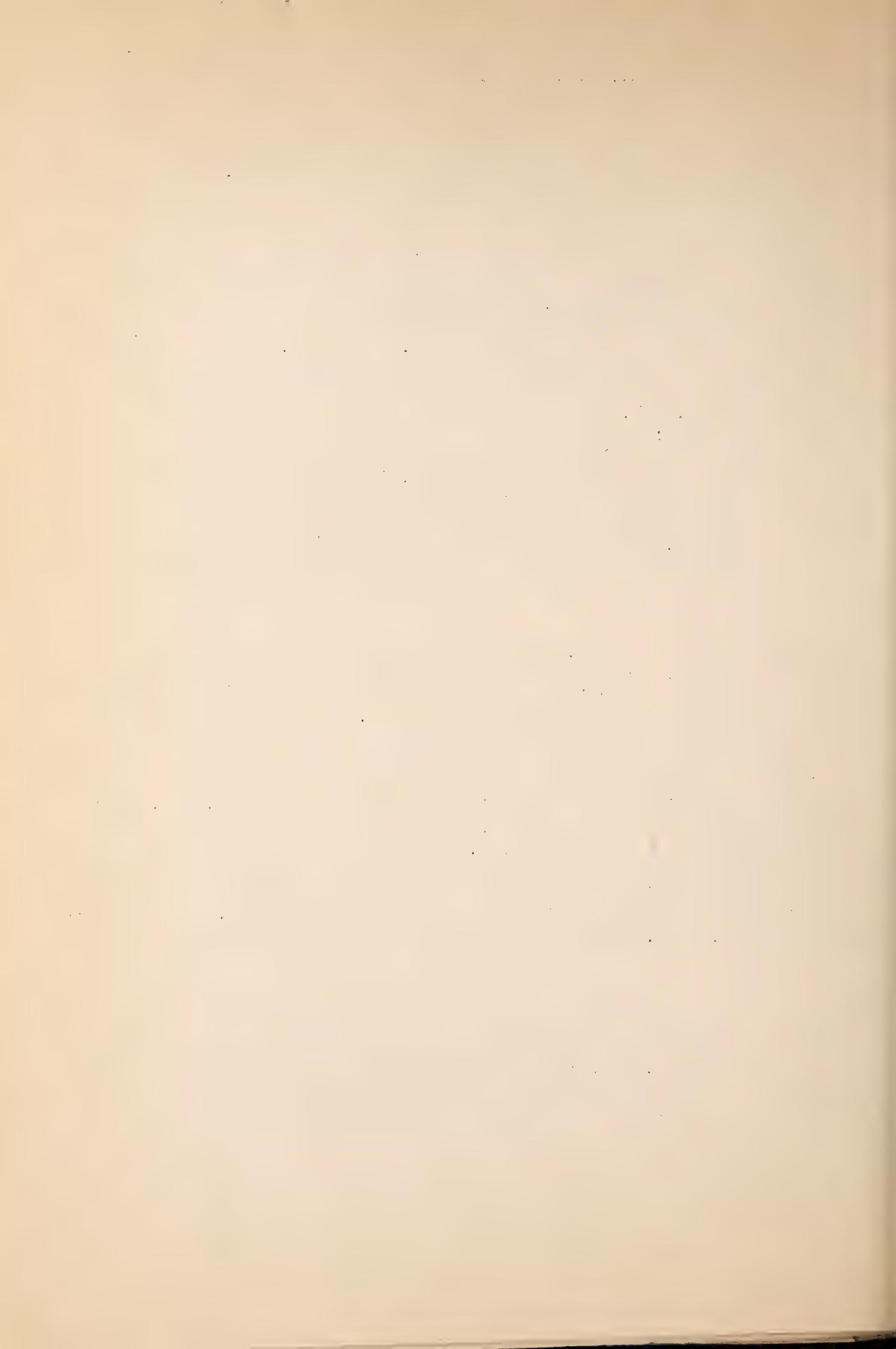
SEND IN PROMPTLY NOTICE OF DELIVERY OF SUPPLIES AND EQUIPMENT:
 The assistant in charge of purchases and supplies asks us to again urge on members of the force in the field the importance of sending in PROMPT notice of the receipt of supplies and equipment. Many purchase orders carry discounts for prompt payment and any failure on our part to secure these discounts subjects us to criticism. Considering the time that must be taken for transmittal of vouchers through the mails and the necessary auditing here, it will be seen that prompt action by field men is essential. PLEASE CHECK ALL ORDERS AS SOON AS THEY ARE RECEIVED AND NOTIFY MR. L. O. GILLETTE IMMEDIATELY if delivery is satisfactory, so that he may pass the voucher along for payment at once. If delivery is not satisfactory he should, of course, be given necessary information so that he may take up the matter with the dealer.

MEMORANDUM NO. 597, dated July 1, 1930, from the Office of the Secretary reads:

"It is hereby directed that the examination of specimens of foods, drugs, insecticides, Paris greens, lead arsenates, and fungicides provided for by Section 4 of the Food and Drugs Act of June 30, 1906, and by section 4 of the Insecticide Act of 1910, shall be made in the Food and Drug Administration."

LUMBER SPECIFICATIONS. Dr. Stockberger is anxious to have the offices of the Department cooperate with the Chief Coordinator in developing adequate specifications for lumber and in promoting the efficient use of wood. In view of the fact that the Federal Government is the largest single user of lumber in the country, it would seem desirable to take full advantage of the facilities of the National Committee on Wood Utilization in the preparation of lumber specifications, checking up on deliveries, etc. Dr. Stockberger suggests that Mr. Axel H. Oxholm, Director of the National Committee on Wood Utilization, U. S. Department of Commerce, Washington, D. C. be listed to receive copies of all lumber specifications sent out to prospective bidders between now and October 1, 1930, and that he be sent copies of the specifications employed in each case. These may be sent to Mr. L. O. Gillette, who will see that they reach Mr. Oxholm.

OATHS OF OFFICE. It is apparently not clear to some of our workers that the Oath of Office which accompanies the Personal Question Sheet, etc. in connection with appointments MUST BE SWORN TO BEFORE A NOTARY PUBLIC OR JUSTICE OF PEACE HAVING AN OFFICIAL IMPRESSION SEAL. They should not be executed before postmaster, etc.



MATERIALS OR SERVICES
SUPPLIED BY OTHER BUREAUS.

In a Memorandum to Heads of Offices, dated July 18, 1930, Mr. F. E. Meloy writes: "It has been noted that in a few instances offices have found it expedient to have repairs made to equipment or stock supplied by other Bureaus in the Department, and in some instances these services and supplies were sent by verbal or written request direct from the offices to the other Bureau. Vouchers have been submitted requesting the transfer of funds because of services and supplies thus furnished and it has been found that no liabilities have been set up to meet them. Any office desiring such services or stock should obtain them on a regular requisition to be drawn through the Property Room on the Bureau concerned. In this manner a liability will be set up on which payment may be made."

This means, so far as our office is concerned, that should occasion arise in the future to incur expenses of the kind mentioned by Mr. Meloy, the matter SHOULD FIRST BE TAKEN UP WITH MR. L. J. GILLETTE, who will arrange to have the necessary requisition drawn on the Bureau concerned.

TESTING SCIENTIFIC INSTRUMENTS, ETC. "In order that there may be uniformity in the handling of requests on the Bureau of Standards for the testing of scientific instruments or apparatus," says Bureau of Plant Industry Memorandum No. 511 of July 15, 1930, "arrangements have been made with the Bureau of Standards to have all such requests emanating from this Bureau" made on a special blank form. "Whenever it is desired to send equipment to the Bureau of Standards for inspection or standardization, the request should be prepared in triplicate for the signature of the Chief of Bureau, indicating just what the equipment is and what is to be done to it by the Bureau of Standards. The request should be prepared and sent to the Property Room of the Bureau for record and a file number before being submitted to the Chief of the Bureau for signature. It is necessary that a central office in the Bureau have a complete record of all such requests in order that reports as well as equipment received from the Bureau of Standards may be identified and delivered to the Offices concerned as promptly as possible."

In the case of employees of the office of Horticultural Crops and Diseases, all equipment, instruments, etc. should be forwarded through Mr. L. C. Gillette, our property clerk, who will furnish the necessary blanks, instruct regarding the preparation of the proper letter of transmittal, and attend to the execution of the general details of the transaction.

EDITORIALLY SPEAKING. John A. Ferrall

NEWS LETTER MATERIAL. One of our employees, explaining his failure to send in field notes or personal items, declares that he is somewhat bashful in the matter of "tootin' his own horn." And he adds that he really doesn't know just what sort of items to send in. The answer to the last objection (we can think of no cure for bashfulness at the present moment) is that we need items that tell what our workers are doing--their observations, their accomplishments. Probably the NEWS LETTER should have a sort of open forum for discussion of problems of general horticultural interest.

The field of the NEWS LETTER, as the present editor sees it, may be realized by considering how large commercial organizations spend money and give deep thought to the problem of encouraging team play in their organizations. They realize that the various units need a certain independence of action, just as our research specialists need it, but that the best results are always secured when the units so intermesh that the organization functions as a balanced machine. To secure this intermeshing, experience has shown that the effective method is to find a way to give all of the workers an understanding of the activities of the organization as a whole so that they may realize just what part they are playing and what they contribute to the results obtained. Where any unit makes an island of itself it not only lessens its own efficiency by shutting its doors against the experience gained by the others; it throws a monkey wrench into the machinery by failing to contribute its experience to the organization.

Large commercial organizations have found that the "news letter" or "house organ" is the most effective means of informing employees of the objects sought by the concern, the methods used in the work, and the results being accomplished. So with the NEWS LETTER the general objectives kept in mind are to supply you first of all with prompt information concerning administrative regulations so that you may handle your work in the proper manner and avoid friction--and financial loss; to seek to keep you informed as to the general projects carried on by the office, and concerning any interesting developments in the work of the various units and investigators; and to use from time to time items of general horticultural interest to keep you informed on the general progress of fruit and vegetable activities--markets, production, diseases, etc.

So we are always glad to have short notes concerning the progress of your investigations, descriptions of short-cuts in the handling of your work, and notes regarding difficulties you may encounter and which your associates might be able to make easier by suggestions. We need, too, little personal-mention items. Other workers are interested in your field trips, and notes concerning your special activities.

 IN A LIGHTER VEIN

POTATO NOTES.--The ardent amateur gardener was talking to his neighbor, says 'CAPPER'S WEEKLY. "How has your potato crop turned out?" asked the latter. "Splendid, old man," replied the amateur gardener. "Some are as big as marbles, some as big as peas--and, of course, there are quite a lot of little ones."

THE WEATHER

What is it moulds the life of man?
 The weather.
 What makes some black and others tan?
 The weather.
 What makes the Zulu live in trees,
 And Congo natives dress in leaves,
 While others go in furs and freeze?
 The weather!

And, apropos amateur gardeners, one of our readers reports that he recently met a friend who sometime back gave up his city position to try farming. Surprised, he said to him, "What in the world are you doing back on your old job in the city again? I thought you were a farmer."

"You made the same mistake I did," said his friend, sadly.

JUST ABSENTMINDED.--A distinguished professor is so absent-minded that his family is always apprehensive for his welfare when he has to go out on field trips. Not long ago, while making a journey by rail, the professor was unable to find his ticket when the conductor asked for it. "Never mind, professor," said the latter, who knew him quite well. "It will be all right even if you never find it."

"No, it will not my friend," contradicted the professor. "I've got to know where I was going."

AT THE POULTRY HOUSE.--The duckling and chick were having an animated discussion, and stopping now and then to comment on passing incidents. "Lookit that ol' rooster with a wooden leg!" cried the duckling. "That's nuthin'," insisted the chick. "My maw's got four wooden legs." The duckling was plainly skeptical. "Gwan," he said. "I don't believe it. How come she has four wooden legs?" "She's an incubator," replied the chick.

ASPARAGUS TODAY?--The grocer came over and stood beside the customer. "We have some very fine asparagus today," he said by way of a tentative suggestion. "No, I'm afraid I cannot use it," said the lady. "I've had to give up buying asparagus. The doctor is getting so near-sighted he is always biting his fingers whenever he tries to eat it."

PERSONAL MENTION

Doctor Auchter arrived in Hamburg, Germany, on July 18th and reports a very pleasant crossing. He spent several days in and around Berlin, conferring with German physiologists and pathologists, and visited a number of laboratories. He then proceeded to Dresden, Leipzig and Munich, viewing the horticultural activities in that part of Germany. Doctor Auchter took the boat trip down the Rhine from Mainz to Cologne, passing through the grape regions bordering the Rhine. Monday, August 11th, he presented a paper before the Ninth International Horticultural Congress, entitled "American Experiments in Propagating Deciduous Fruit Trees by Stem and Root Cuttings."

Charles Brooks is visiting points in Washington, Oregon, Idaho, Montana, Illinois and Indiana, conferring with members of the staff and cooperators in connection with his studies of fruit diseases. He plans to attend the meeting of the Botanical Society of America at Friday Harbor, Washington, August 19-22.

A revised edition of "National Standards for Farm Products," issued as U. S. Department of Agriculture Circular No. 8, is now ready for distribution. This circular has chapters dealing with fruits, vegetables and related products, including products for canning; containers for fruits and vegetables, etc. and lists sets of specifications or descriptions of the grades in all the standards for fruits, vegetables and related products.

James G. Gray, Jr., is making a trip from California to Washington, D. C., visiting points in New York and New Jersey, to conduct investigations on the transportation of citrus fruits. While in Washington he will confer with project leaders and administrative officers concerning plans for future work.

D. F. Fisher left Washington early in August for a trip to points in Illinois, Michigan, New York, Virginia and West Virginia, to confer with officials concerning spray residue removal, etc. He attended the International Apple Association Convention at Grand Rapids, Michigan, August 12-15, conferring with apple shippers and representatives of steamship lines in regard to apple export investigations.

Victor R. Boswell is visiting points in Ohio, Indiana, and Colorado to inspect vegetable standardization plots, to confer with collaborators, and to arrange for future cooperative relations.

J. H. Beattie is spending approximately one month in the vicinity of South Bend, Indiana, securing harvest data on crops grown in muck soil, etc.

"Fresh vegetables for an average family may be grown upon a large backyard or city lot," says W. R. Beattie in his revision of Farmers' Bulletin No. 1044, now ready for distribution. He points out, also, that the production of vegetables at home relieves transportation pressure, utilizes idle land and spare time for food production, and that thousands of acres of idle land are available for such use within the boundaries of our large cities. The bulletin discusses from a practical standpoint the problems that confront the city gardener.

F. J. Stevenson is spending a week in North Carolina, inspecting seedling potatoes being grown at various points in the State, and conferring with station officials relative to the cooperative potato breeding work.

Frank L. Goll has returned to the United States after some eighteen months abroad. During the major portion of this time he acted as representative of the Department at the Ibero-American Exposition at Seville, Spain. While in Spain he had an opportunity to make an interesting tour through Andalusia.

Michael Shapovalov and F. Sidney Beecher of this office are joint authors of "Experiments on the Control of Tomato Yellows," just published as Technical Bulletin No. 189 in the Department's series. Tomato yellows is a virus disease, is not seed borne, and its spread in the field is due exclusively to an insect carrier--the beet leaf hopper, Eutettix tenellus Baker.

Robert H. Peebles, principal scientific aid, with headquarters at the U. S. Field Station, Scottsdale, Arizona, is spending a few weeks at the U. S. San Diego Acclimatization Garden, Torrey Pines, California, assisting Eugene Fry, Jr. in the assembling and operation of special plant propagating facilities being installed at that station in cooperation with the Office of Cotton, Rubber and other Tropical Plants.

MORSCHER-DRECHSLER.--July 30, Miss Mary Florence Morscher, senior scientific aid, and Dr. Charles Drechsler, pathologist, both of our staff, were married at Mt. Vernon Methodist Episcopal South Church, Washington, D.C. Lester E. Barrett, Victor H. Neal and W. A. Whitney, of the office of Horticultural Crops and Diseases, were among the groom's attendants. Dr. and Mrs. Drechsler left immediately for New York City, sailing on August 2d for two months in Europe. While abroad they will attend the International Botanical Congress at Cambridge.

"In general," continues Mr. Gould, "we feel that a representative of the office on going into a county either for the purpose of making observations from some industry standpoint or to locate experimental work that is to continue more or less indefinitely, would do well to get in touch with the county agent and should do so when practicable, for various reasons.

"Mutual benefit is always possible from such contacts. The office representative goes out as a specialist. The industry which attracts him to a county is in all probability of sufficient importance to have received attention from the county agent. In such a case, each in his own way, will be benefited by contact with the other. Again, if the office representative visits a considerable number of growers of a particular crop on which he is working, and later those growers talk with their county agent in regard to their visitor, it is likely to be a cause of embarrassment to him if he is compelled to confess ignorance of the presence in the county of the Department men. The general public, not familiar with organization details, may easily conclude that there is lack of harmony and coordination in the work and among the workers. Besides, there is the matter of official courtesy, which though it may not seem to amount to much in any one case, helps mightily to oil the ways and make the going smooth. After all, courtesy, wherever it is found, is nothing but an application of the Golden Rule.

"But no hard and fast course of procedure can be laid down, nor is it desirable that there should be," Mr. Gould believes. "Every case should be determined by circumstances. Of course our office representatives are research men. In going into a State their first contacts are usually with Experiment Station workers, and naturally so, rather than with Extension workers. Often, a trip to a State or to some section of a State is for a very specific purpose; the office representative is in need of haste; contact with a research man in the Experiment Station gives him the needed assistance; he does his work, perhaps at a particular place or at most in only a small number of places, and rapidly goes to his next place of observation or research. Under such conditions, delays incident to making an appointment with a county agent would often cause inconvenience with no compensating advantage.

"However, when circumstances permit, mutual helpfulness and courtesy seem to suggest," he concludes, "as a general principle the making of contacts with county agents and other State representatives interested in the specialty being served, and particularly in matters having to do with horticultural crop production, but this general principle should be accepted and applied with reason by both State and office representatives."

NOTES ON POTATO CROSSES. "The recording of the results obtained from potato crosses made during the present season has been completed," writes Dr. C. F. Clark. "A summary of the data shows that 5,308 flowers were pollinated, 53.13 per cent of which produced seed balls. These crosses represent 28 different combinations. The percentage of successful crosses varied with the varieties which were used as the parents, some crosses producing no fruits, while as high as 97 per cent was obtained in one instance.

"The seedlings at this station (Presque Isle) have made an exceptionally good growth this year. A study of these shows the presence of many types which afford a basis for selection for the development of commercial varieties, some of the most important differences being in habit of growth, size and color of leaves, period of maturity, and resistance to certain of the virus diseases. Two of the older seedlings, which have been grown for eight seasons, are of special interest because of the high degree of resistance to mild mosaic which they possess."

GREELEY, W. C. Edmundson writes that he attended the annual visitor's day at the high altitude experimental station, Avon, Colorado, August 7th. "This farm is primarily a horticultural station and is operated by the horticultural department of the Colorado Agricultural College. The forenoon was devoted to visiting the experimental plots, while in the afternoon a short program was given. Experiments conducted at the station include potatoes, peas, beans, raspberries and cauliflower and other horticultural crops. Some fertilizer work is being done this year. The variety test of potatoes which was started a few years ago included about 200 varieties. This number has been cut down until this year the test included 150 varieties, according to Mr. C. H. Metzger. At the present time it is estimated that many of the varieties must be discarded because of disease. Considerable mosaic, leaf roll and rhizoctonia were noted in the plot. A strain of Cobbler known in Colorado as the Stone strain, looked very promising. A rather extensive test of garden peas was being conducted at the station. It was stated that the Perfection Pea, which is a garden variety, will probably replace the field peas in the San Luis valley.

"In the fertilizer plots, where phosphate was applied and where a 6-12-6 fertilizer was used, little or no difference in the vine growth could be noted. Potato growers in the Carbondale district reported a fair outlook for potato yields this year, while reports from the San Luis valley were that the crop will be somewhat below normal because of disease.

"We held our annual visitors' day on Thursday, August 14th."

PRESQUE ISLE, MAINE. Writing under date of August 18, P. M. Lombard states that "The condition of potato virus at this time in Aroostook county is not very good. It is very doubtful if there is a field of potatoes in the county that is free from late blight. In some sections the blight has made such rapid progress that some fields are all down and others well advanced. This condition holds true in the Washburn section, in the St. John River valley, and some sections of Limestone, Easton, Fort Fairfield, and Mars Hill. Early blight is much worse than usual on early varieties, and is gaining rapidly on the later sorts. Potato aphids, which are usually very abundant earlier in the season, are just beginning to be noticed.

"For the most part, Irish Cobblers are in an advanced stage of maturity. Several cures were harvested last week, and this week harvesting of the variety is more general. The weather has been cloudy with considerable rain. Late blight under present conditions is found to make rapid progress. A small amount can be found in some of our experimental plots, but on the whole we are comparatively free from it on Aroostook Farm.

"Grain harvesting was begun last week and should, with favorable weather, be completed before the first of September. In general, potato harvesting does not begin until the second week in September. With prices attractive some stock is shipped in August almost every year without regard to its maturity. This year with our advanced season and so many fields already dead from early and late blight, early harvesting will be more general if the price is attractive.

"The Annual Field Day is to be held at Aroostook Farm on August 20th. Last year some 3,000 attended, and an ever larger number is expected this year. Messrs. Teague and Wilson of the Federal Farm Board will be the principal speakers. Others listed to speak include Dr. Fred Griffee, Acting Director of the Maine Experiment Station, Frank P. Washburn, Commissioner of Agriculture, and Arthur Deering of the Extension Service.

"A conference was held on Aroostook Farm July 30 and 31 to outline and discuss the several phases of potato breeding work. Those in attendance were Dr. Wm. Stuart, and Dr. F. J. Stevenson from Washington, D. C.; H. C. Moore, Michigan State College; Dr. J. R. Livermore, Cornell University, Ithaca, New York; Dr. T. E. Odland, Rhode Island Experiment Station, Kingston, R. I.; Dr. C. F. Clark, P. M. Lombard, and E. H. Milstead."

THE DROUGHT. The drought, of course, is still causing anxiety though broken by rains here and there. The Bureau of Agricultural Economics reports that the movement of fresh fruits and vegetables to market compares closely with last year and reflects only the usual seasonal changes, though the drought has reduced prospects for potatoes and sweet potatoes. Shipments of 33 fruits and vegetables totalled 456,000 carlots as compared with 478,518 for the same period last year.

Reports in the Washington, D. C. newspapers concerning the effects of the drought in Maryland and other nearby points indicate that the effect is likely to be shown more clearly later on, and that the canning industry has been hard hit by the dry spell. The secretary of the Tri-State Packers' Association, an organization of Maryland, Delaware and New Jersey canners, predicted, according to the Washington Star, that the Maryland corn pack this year would be only 25 per cent of the normal; peas, about 20 per cent; string beans, 30 to 40 per cent; and tomatoes, 50 to 60 per cent--though some tomato growers expect an even smaller pack.

While the recent relief from drought and high temperatures in most parts of the country is expected to aid materially in maintaining a normal volume of fruit and vegetable shipments until the annual pack of movement is reached in early October, there is no discounting the injury that has been done already. The Department has sent out a press notice urging fall garden planting in drought stricken districts, explaining that several late vegetables can still produce a crop and prevent further draining of the family larder. Dr. W. R. Beattie has pointed out that while north of Pennsylvania and southern New York the season is already too late to hope for a crop from future garden plantings, south of these sections the possibilities for late gardens have a much wider range. And as far north as Pennsylvania, gardeners may grow turnips, kale, spinach, late lettuce and late snap beans with reasonable assurance that the crops will mature, now that the drought is being broken by rains.

SUPPRESSING RABBITS. "Have you ever heard," writes a correspondent to the American Fruit Growers "of using the automobile, spotlight and a shotgun to kill the rabbits in an orchard? We tried it this fall and it worked fine. The first night we were out about an hour and killed 12 and the second 15. A dark night is best. Three men do the work--one drives, one sits straddle the hood with a spotlight in his hands, and the third operates the gun and stands on the running board close to the man with the light."

And, apropos the drought, the Sod Surgeon of the Fertilizer Review reports getting a radiogram stating: COWS IN DROUGHT AREAS GIVING POWDERED MILK.

ROSE SEEDLINGS. "The hybrid rose seedlings planted in well prepared soil have withstood the dry spell very well," reports Martin Bilon of the U. S. Plant Field Station at Glenn Dale, Maryland, under date of August 15. "They have received one good watering on August 12. The season's plantings have been unique, some being planted on Sundays and others late in the night by moonlight--each time after some rain has fallen. The seedlings planted consist of 198 different species and variety combinations, about 1800 plants, crosses made with Arlington Rose Test Garden Hybrid Tea varieties.

"The rose hybridization this year has been done on a mass scale with Hybrid Tea Rose pollen as in 1928. Due to a very dry soil condition some hips may fall off prematurely, as the older plantings are showing lack of moisture. This has been a season of much watering until our well became dry and every known water supply has been called on. It is a strange sight to see moles running on the soil surface, hunting for food and water. It has also been observed that the Mexican bean beetle has disappeared and no chestnut weevils have been seen yet--things concerning which we are not particularly grieved."

SPECIAL NOTICE RELATIVE TO USE OF PERSONALLY-OWNED AUTOMOBILES:

"Hereafter, in all letters of authorization permitting the use of personally-owned automobile, where the automobile is used for the convenience of the employee rather than required for strictly departmental purposes, only 3-1/2 cents per mile, not to exceed railroad fare by the shortest practicable route, will be allowed. Exceptions will be considered on their merits in cases where a transfer of headquarters or comparable situation justifies. The paragraph noted below will be uniformly used:

Where expenses for travel can be reduced thereby, considering also difference in time expended, instead of using public carriers, you are authorized to perform travel in your personally-owned automobile for which you will be allowed 3-1/2 cents per mile, provided, however, that reimbursement shall not exceed railroad fare by the shortest practicable route. Time taken for this travel in addition to that which would be required to make the trip by rail to be charged to annual leave.

In requesting letters of authorization, full information must always be included showing, who, if anyone, will accompany the employee for the travel to be performed."

EDITORIALLY SPEAKING. John A. Ferrall.

INSURANCE. In connection with the discussion of automobile liability insurance in the May 1, 1930, issue of the NEWS LETTER, page 89, we have just recently mailed to our employees an informal (unofficial) discussion of the policy offered by the Reitan-Lerdahl Company. I say unofficial because the circular is not to be interpreted as endorsing or recommending any particular policy or company. As Dr. Stockberger states, "The information is given out in view of the receipt of many inquiries from field officers as to the possible existence of an opportunity to insure individual trucks or automobiles for the benefit of groups of users....It happens that the offer of Reitan-Lerdahl and Company is the first proposal which has come to the attention of the Department of such scope as to be available to all employees and in all locations." If you have not received a copy of the circular about this policy, write Mr. Swartz.

LIFE INSURANCE. In connection with the discussion of automobile liability insurance, it has developed that in spite of the wide publicity given it prior to its formation a few years ago, some of our workers do not know of the existence of the U. S. Department of Agriculture Beneficial and Relief Association. This is merely straight life insurance under the group plan. The amount of insurance depends upon the employee's age and is

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|-----------------------|------------|
| Up to age of 46 | \$1,000.00 |
| 47 to 50 | 750.00 |
| 51 to 60 | 500.00 |
| 61 and over | 250.00 |

That is, by paying the Association application fee of \$1.00 and dues of \$1.00 a month (\$12 a year) you can get life insurance as indicated, depending on your age when you apply. The policy may be continued even if you leave the Department. New employees are eligible for membership without regard to age or physical condition provided application is made within 60 days from effective date of appointment. For others the age limit is 40--that is, employees who are in excess of 40 years of age (computed to nearest birthday) are ineligible to membership. This means that employees who failed to apply when the Association was being formed, and who are now over 40 cannot get the policy though any employee under 40 may be admitted provided he is acceptable as an insurable risk. Blanks, etc. may be secured from Mr. J. M. Kemper, Room 23, East Wing, U. S. Dept. Agr. Washington, D. C.

HEALTH AND ACCIDENT INSURANCE. Tentative inquiries are now being made to determine whether it is possible to get an economical and satisfactory group policy to cover health and accident insurance for our workers. If you have any information on a cheap and satisfactory policy of this sort, you might write Mr. Swartz about it and he will pass the information along to the proper authorities.

IN A LIGHTER VEIN

POINTED REMARKS.--One of our investigators brings in the story of the lady who approached a train porter in one of the larger cities and asked concerning the destination of a train that seemed about ready to depart. "This train goes to Buffalo and points east," said the porter.

"Well," said the lady, decisively, "what I want to find is a train that will take me to Syracuse--and I don't care which way it points."

BELIEVE IT OR NOT.--One of our men reports that he tried to get a small reimbursement check cashed at the little delicatessen store near his home. The owner was very apologetic but declared that it was impossible--he had an agreement with the bank on the subject. Our worker wanted to know how that could be--and wasn't a Government check always good, and so on.

"Yessa, yessa," agreed the store owner, hastily, "but you know a disa bank on the corner? Well, we gotta agreement--I no casha da checka; he no sella da groceries."

SWEET TOLERANCE.--"Look heah, woman," said Sembo, indignantly, "yo' kno yo' all jes' married me to get my Guv'ment insurance."

"Ah knows dat, honey," admitted his wife, frankly, "but ain't I bin a-willin' to let yo' die a natural death?"

RELIGIOUS NOTE.θ--A well-known missionary was considerably annoyed by the questions being put to him by members of his audience in a large city where he was lecturing.

"Do you believe the story of the prodigal son and the fatted calf?" demanded one listener.

"Of course," said the missionary.

"Well, can you tell me whether it was a male or female calf?"

"Yes," said the missionary, "it was a female."

"How do you know?" asked the interrupter.

"Because," replied the missionary, looking the questioner meaningly in the eye, "I see that the male is still alive."

TRAFFIC PROBLEMS.--The traffic officer came over to the automobile. "Lady," he inquired with studied patience, "didn't you see me hold up my hand for you to stop?" The fair motorist assured him that she had not seen his signal. "Didn't you hear me blow my whistle?" persisted the officer. The lady had not heard it. "And you didn't hear me call out for you to stop?" She shook her head. An expression of hopelessness spread over the policeman's face.

"Well, I guess I might as well go home," he said. "I don't seem to be doing much good here."

PERSONAL MENTION

J. R. Magness made a short trip to Hancock, Md., Martinsburg, W.Va., and Winchester, Va., late in August to conduct investigational work on orchard irrigation and biennial bearing. He gave an informal talk before the meeting of the West Virginia Horticultural Society at the University Experiment Station near Martinsburg, West Virginia, on August 21.

Neil E. Stevens has revised Farmers' Bulletin No. 1458, "Strawberry Diseases," and it is now available for distribution. He points out that strawberries are more widely grown in the United States than any other small fruit, and that consequently the great variety of conditions under which the fruit is grown necessitates different methods of culture and handling--and methods of control of strawberry diseases must therefore be adapted to local conditions.

C. A. Magoon expects to leave Washington State about September 1 for points in California and Texas. He has spent the past three months in the Pacific Northwest, studying microbiological problems in connection with frozen pack products.

J. C. Walker and L. M. Black have been given special authorizations for the study of severe development of Fusarium rot of onions.

Cyril O. Bratley is visiting orchards in western Connecticut to make arrangements for obtaining apples for further studies of the development of apple scab in storage.

A practical method for determining the amount of oil retained in citrus foliage after spraying with oil emulsions is described by L.L. English in the Journal of Agricultural Research for July 15, 1930, under the title "A Method for Determining the Quantity of Oil Retained by Citrus Foliage after Spraying." To determine the effects of oil emulsions on Satsuma orange trees and on the insects which infest their foliage, says the author, it is desirable to know how much oil remains on the foliage after spraying. His work along this line led to the development of the method described in his paper.

S. P. Doolittle, senior pathologist, is transferring his permanent headquarters from Madison, Wisconsin, to Washington, D. C., where he will continue his investigations on mosaic diseases of truck crops, and take up work on the diseases of cucurbits.

Walter T. Swingle, principal physiologist, writes that he and Frank A. Thackory, agriculturist, met Dr. Taylor on his recent visit to the Pacific Coast and had an opportunity to show him the dryland arboricultural experiments under way at Banning, California; the special propagating and greenhouse equipment being installed on the grounds of the U. S. San Diego Acclimatization Garden at Torrey Pines; and the experiments in date growing in the vicinity of Indio, California. Fruits of the Deglet Noor variety were beginning to color at the time of Dr. Taylor's visit. Incidentally, although the U. S. Experiment Date Garden at Indio, California, is perhaps the hottest point at which work of this office is conducted, the temperature when Dr. Taylor was there was something less than 100° F., actually colder than the weather he would have encountered in Washington, D.C. at the time.--early in August.

W. J. Zaunmeyer is author of Technical Bulletin No. 186, "The Bacterial Blight of Beans Caused by *Bacterium Phaseoli*," just made available for distribution. "Bacterial blight of beans caused by *Bacterium phaseoli* is seed borne and may cause characteristic lesions on stems, leaves, pods, and seeds. In cases of severe infection the seedling may often manifest a wilting, resulting from disintegration, toxic effects of the bacterial by-products, or plugging of the xylem vessels of the stem." No variety under study showed complete resistance, but four varieties of the Refugee type did show a high degree of resistance, 19 medium resistance, and 12 little or no resistance. The paper was presented in partial fulfillment of the requirements for the degree of doctor of philosophy at the University of Wisconsin.

John W. Roberts plans to leave Washington early in September for a short trip to Vincennes, Indiana, and Centralia, Illinois, to investigate peach bacterial spot and its control.

Joseph L. Kelly is spending approximately two months working in cranberry bogs in New Jersey in connection with his investigations of cranberry diseases.

F. L. Mulford attended the Sixth National Shade Tree Conference at Cleveland, Ohio, August 27-29, and gave an informal talk on transplanting trees and shrubs.

F. A. Krentz made a short visit to Mason City and Clear Lake, Iowa, late in August, for the purpose of making a study of seedling potatoes being tested in this vicinity.

What is needed is storage space, well protected, where the temperature may be brought as near the freezing point as possible without the aid of artificial cooling. In many storage houses scattered over the country, where apples are stored until marketed, the temperature control is entirely through ventilation. Such houses are satisfactory throughout the northern portion of the country--north of the Mason and Dixon line. There are locations south of this line where, due to elevation, the nights become cool early in autumn and it is possible to get relatively low temperatures in the storage house--down to about 45 degrees by November and below this for the rest of the winter. Pears, too, especially Kieffer, Anjou and Winter Nellis varieties, are good keepers in such houses. Grapes can be stored only temporarily in ordinary storage.

In building a storage for keeping apples and other fruits, a basement or dugout mostly below the ground does not require special insulation. Concrete or stone walls and a well drained dirt floor are satisfactory. Where a section of a cellar is partitioned off to form a storage room, cinder building blocks make a good wall through which heat does not readily pass. Some of the forms of wallboard are all right for insulating material for above-ground storage. If the basement of the house is used for storage, partition off a section at a point the farthest away from the furnace, and provide plenty of window openings to let in fresh air.

Apples for storage should be allowed to get reasonably ripe, but not overripe on the trees. They should be picked and handled carefully to avoid bruising, and then cooled rapidly, possibly allowing them to stand outdoors overnight before putting them in the store room. They should not, however, be left exposed to the sun after they are gathered. After they are placed in the storehouse, give them plenty of ventilation at night to lower the temperature. They may be stored in bushel baskets, in hampers, on shelves, in barrels or in crates--but not in bins. They do not get enough air circulation when stored in bins.

Now, let's see how the storage of apples ties up with the storage of vegetables, where we have a much larger number to consider. As stated above, we divide the vegetables into two groups; in the first, those requiring a relatively low temperature but above freezing, potatoes, cabbage, onions, beets, carrots, turnips and celery; in the second, requiring higher temperatures, sweet potatoes, pumpkins, squashes and tomatoes. Anywhere in the north where the temperature can be lowered by ventilation, the type of cellar or house used for the storage of apples will answer for most vegetables. The cool corner of a cellar underneath the house, or a barn cellar, will be fairly satisfactory, though the ideal would be a small place with an underground portion in which to store potatoes and root crops, and an above-ground or partly above-ground section in which to store apples and other fruits, onions, etc

Onions require dry, cold air, and would not store to advantage in the same compartment with potatoes and root crops. Then, too, onions, cabbage and turnips are apt to give rise to objectionable odors in the cellar or dwelling and so should be stored elsewhere if possible. We have seen good storage houses built of concrete blocks or cement for the basement portion and lumber with plenty of insulating material for the upper portion. In some cases the entire structure is of concrete block, but some form of lining or insulating material is essential. The main point is to have plenty of inlets for cold air and roof ventilators to carry off the warm air. Underground pits are satisfactory for the storage of vegetables, provided they can be ventilated. In the South, the problem of providing a storage is more difficult, but the old-fashioned sod cellar, built under the shade of a tree, and with a door at each end and ventilators in the top, has much to recommend it. With sweet potatoes the storage house should be built entirely above ground and so constructed that it can be kept warm during the winter. A curing temperature of 75-85 degrees for a period of about ten days is recommended, after which the temperature should be lowered to about 55 and kept near that point. Pumpkins and squashes require about the same treatment as sweet potatoes. Green tomatoes do not require any curing period, but they ripen best if kept at a temperature of 65-68. Storing sweet potatoes in outdoor pits is not recommended. They may be stored in crates placed on a shelf near the heater in the basement, or in a warm upstairs room. If thoroughly cured for ten days at about 85 degrees, with free ventilation, they will keep in these places. They should not be packed in sand.

All vegetables that require a low temperature with a reasonable amount of moisture, may be stored satisfactorily in outdoor pits--potatoes, cabbage, beets, carrots, turnips and rutabagas. Parsnips and salsify may remain in the rows where they grow, as freezing does not hurt them. Celery may be stored in a trench or in the pit of a hotbed, where it can be kept cool and not allowed to freeze. The freezing temperature of apples is approximately 28 degrees, and that of certain vegetables below 32, but it is recommended that the temperature of the storage place be kept above 32 degrees for safety. If you can hold the temperature at about 38, or at the lowest, 36, you will be safe and get excellent results. Vegetables keep better if not stored in too large quantities. Potatoes are an exception and may be kept in bins, but barrels with a few auger holes for ventilation are more satisfactory for storing the home supply.

Cabbage can be stored to best advantage on slat shelves; and beets, turnips and carrots in boxes or barrels, covered with slightly moistened sand. A little water should be added from time to time to keep the sand from drying out. For sweet potatoes, ventilated bushel baskets or hampers are good; while pumpkins and squashes should be laid on shelves, preferably well above the floor of the storage house. For cannas and dahlias, boxes containing sand are generally used--or the cannas may be placed on the cellar floor and a little soil sprinkled over them.

PRESQUE ISLE, MAINE. "For the past week the weather has been clear and quite warm during the middle of the day," reports E. H. Milstead, under date of August 28, "Ft. Kent was visited Sunday and there does not seem to be nearly so much late blight as there is in this section and Fort Fairfield. There are several farms out on Chapman road that have been sprayed five times and when I saw them about a week ago, did not show the least bit of blight; in fact there was quite a lot of bloom all over the field. These were planted early.

"Nearly every direction one goes, most of the fields look as if we had had a very heavy frost. There is not much blight in our plots here at the station. I understand that there are from twelve to fifteen cars of Irish Cobblers being loaded here each day at \$1.50 per barrel."

GREELEY, COLORADO. "Thursday, August 14, was visitors day at the Colorado Potato Experiment Station," writes W. C. Edmundson. "Up to noon that day it was thought that it would be necessary to postpone the program owing to the heavy rain, but considering the large turnout in the afternoon it was thought advisable to continue with the plans. A program was given in the greenhouse, after which practically all farmers visited the field plots, although it was almost necessary to wear boots in the field. Dr. L. L. Harter gave an interesting talk on local bean conditions. He informed the growers that there was little danger at this time from rust and bacterial blight although the weather was quite favorable for their spread.

"County Agent H. H. Simpson explained the value of calcium chlorate in controlling morning glory and blue knap weed. He recommended the solution containing two pounds of the poison for spraying one square rod. Mr. Simpson also described alfalfa varieties for the Greeley district. Dr. G. H. Rieman discussed various phases of the experiments being conducted at the farm, and on the field tour. Dr. W. J. Zaumeyer explained the field plot work which is being carried on with beans. He stated that 350 strains of beans were being grown at the station this year. He also explained that it is believed that the bean mosaic disease is transferred both by seed and insects and that an attempt is being made to determine what insects carry the disease. He said that of the new strains of seed which are being grown in an effort to find a disease-resistant variety, a new one resulting from a cross between the Wills Red Kidney and Refugee Wax looks rather promising. Mr. Lawrence Schall discussed the potato crop from a disease standpoint, while the writer conducted the tour through the potato cultural plots and explained to the visitors what the Department is trying to do in the way of growing new seed potatoes at the station."

POTATOES IN MICHIGAN. William Stuart, senior horticulturist, and F. J. Stevenson, geneticist, spent August 20 and 21 inspecting the potato investigation and breeding work under way at the Michigan Agricultural Experiment Station at East Lansing and Lake City, Mich. The most outstanding experiment at East Lansing was a comparison of irrigated with non-irrigated plots. The low rainfall this season has served to accentuate the benefits to be derived from irrigation. A few of the older U. S. Department seedlings were being grown at this point and it was interesting to note their growth and behavior there as compared with Presque Isle, Maine.

The chief feature of interest at the Michigan Potato Experiment station at Lake City was some 4,000 or more seedling potatoes grown from hybridized seed furnished by this office. These plants represented all degrees of size, maturity and relative promise. At this point, too, a yield study is being made of the relative value of some of the older Department and Michigan-originated seedlings. Notwithstanding the fact that the weather as a whole has been relatively dry, the Lake City experimental tests did not show any material injury from the drought. The afternoon of August 20th was devoted to an inspection of the certified seed Russet Rural section between Lake City and Petoskey. Lack of soil moisture was plainly evident throughout this region and the quality of the seed is bound to be less vigorous than under more favorable conditions. Dr. Stuart spent the forenoon of August 21 in Chicago, calling on members of the trade.

POTATOES IN IOWA AND MINNESOTA. August 25-28, Dr. Stevenson reports an inspection tour of the potato breeding plots in Iowa and Minnesota was held by cooperators and others interested in the potato breeding project. The experimental plots at Clear Lake, Iowa, were visited first. From there the party went to Hollandale, University Farm, Duluth, Grand Rapids and Crookston (Minnesota). Some of the older Department seedlings looked quite promising on peat soil at Clear Lake. They were somewhat later than desired for that section, but the tubers had good shape and size. The experimental plots at all the stations visited gave evidence that rapid progress is being made in the development of good breeding stock and that in the near future more desirable commercial varieties of potatoes will be obtained. The drought throughout this section has affected the plant growth and yield quite markedly, the tubers in most cases being small for the time of the year at which the trip was made. The cooperators making the trip were A. T. Erwin, Iowa State College; F. A. Krantz, University of Minnesota, Russell M. Bailey, A. F. Yeager, North Dakota State College, W. C. Edmundson, C. F. Clark, and F. J. Stevenson of our own office. Dr. T. E. Odland of Rhode Island State College was present for the time spent at University Farm. Among others who contributed to the success of the trip were A. G. Tolaas, University Farm, St. Paul, Minn. and Ben Picha, Hollandale, Minn.

ADDITIONAL LIFE INSURANCE. The NEWS LETTER of September 1, 1930, mentioned editorially the matter of group life insurance. We are now informed that through an arrangement with the Shenandoah Life Insurance Company, which underwrites the insurance, another unit of insurance will be available to members wishing to obtain additional protection. "The conditions under which this additional unit is allowed are not as liberal as they were during the formative period of the group. The additional unit will be issued only upon the filing of a medical questionnaire and the insurance company reserves the right to accept or reject any application on the basis of the data submitted. We believe, however, that the proportion rejected will be relatively small. The additional unit will not necessarily be in the same amount as your present certificate. If your age as of September 15, 1930 (computed to nearest birthday) places you in a lower benefit group your additional unit will be in the amount prescribed for the group into which your age now places you, according to the following schedule; Up to Age of 46, \$1,000.00; 47 to 50, \$750.00; 51 to 60, \$500.00; 61 and over, \$250.00.

"The cost of the additional unit will be \$1 per month--no membership fee will be charged. Advance payments on the unit you now hold cannot be credited to the new unit. Additional remittances to cover the cost of the new unit will be required. Employees not already members of the group may obtain one or two units of insurance under the same conditions as are now applicable to membership in the Association. The membership fee will be \$1 regardless of the number of units applied for." If you desire to apply for an additional unit under the conditions outlined above you may secure application forms, etc. from Mr. J. M. Kemper, Room 23, East Wing, U. S. Department of Agriculture, Washington, D. C. PLEASE NOTE THE TIME LIMIT! "Any member may apply for the additional unit up to November 15, 1930. After November 15, 1930, no member in excess of forty (40) years of age on the date the new unit would become effective, will be eligible to receive additional insurance.

"Members who have retired or otherwise separated themselves from the service prior to September 15, 1930, are not eligible to receive the additional unit of Insurance. While the Insurance Company will waive evidence of insurability and accept all applications for the additional unit without regard to the physical condition of the applicants provided 75 per cent of the membership applies for the additional unit, we doubt that so large a percentage of the membership will wish to receive additional insurance. However, as the Company will not issue the additional unit under any circumstances unless 25 per cent of the membership is accepted, we urge all members to give the matter prompt attention and file application without delay. The Association wishes to make it clear that the allowance of the additional unit is contingent upon the conditions herein set forth, and that if the requisite percentage of the membership is not accepted for the additional unit all payments will be refunded."

EDITORIALLY SPEAKING. John A. Ferrall

WATERMELONS AWARDED "V.C." An anonymous reader postcards me: "There was an old man in Peru, who dreamed he was eating his shoe. He awoke in the night, just shaking with fright--and found it was perfectly true!" This correspondent adds, "He must have eaten a trifle too much watermelon."

It seems to me that this somewhat indirect criticism of the watermelon is not only unjust but reveals an unpardonable ignorance of the latest horticultural developments. The watermelon is no longer to be treated as a mere luxury--a frivolous and light member of the great horticultural family. Yes, the watermelon has graduated into the ranks of food products and has been awarded the V.C. ("vitamin carrier," not Victoria Cross) by no less an authority than our own Bureau of Home Economics, whose studies show that it is a good source of two important vitamins, A and C, and contains detectable amounts of vitamins B and G.

The announcement created some little excitement last May, and brought forth the following editorial comments in the Country Gentleman for June: "One hardly knows whether to applaud or deprecate the Department of Agriculture's blithe announcement that watermelons have been found to contain vitamins. The news is so surprising that it leaves one for the moment dazed and incapable of any sharply defined emotion. **Vitamins in watermelons!** The idea seems incongruous, almost grotesque. Yet the fact must be faced. The watermelon, which for generations has been regarded only as a form of entertainment, now quite unexpectedly takes its place as a public utility, along with such things as household electricity, spinach, gasoline and long-legged cotton underwear. It is rather like discovering that some delightful, worthless old Falstaff of your acquaintance has for years been supporting an orphanage for Eskimos. You admire him for this secret **virtue**, yet somehow or other feel less comfortable in his presence. Watermelon growers, of course, will reap considerable benefit from the newly discovered dietary quality of their product. Within the past few years the gospel of vitamins has spread across the land like a prairie fire fanned by a Texas norther. An appalling number of people who heretofore ate watermelons occasionally for their juicy sweetness will now eat them regularly as a matter of conscience."

The tests by the Bureau of Home Economics were made with laboratory animals, all of which ate the watermelon readily, and the guinea pigs developed a keen appetite for it. The growth and good physical condition of the animals in the tests for each vitamin indicated that the watermelon in their diets supplied the vitamin being studied. "A scientific method, doubtless," comments the Country Gentleman, "but offhand it is a little hard to understand why twelve-year-old boys were not used as experimental subjects!" This was perhaps because there was no possibility of securing enough watermelons to conduct a test with the boys as subjects!

IN A LIGHTER VEIN.

A Handy Alibi.--The three-year-old youngster had pulled a large bunch of nasturtiums in his grandmother's yard, although he had been strictly forbidden to touch the flowers. A courtmartial was held with grandma as judge and advocate.

"Tommy," she said, "who pulled grandma's flowers?"

"Kathleen," said the little fellow, with a sad countenance. Kathleen was his older sister.

His grandfather, standing by, was a rather stern old gentleman and a stickler for truth, so the boy's evasion irritated him and he said sternly: "Tommy, be a man. Speak up and say: 'I did it'".

The little fellow's face brightened and he gave a sigh of relief.

"Oh, yes," he said, readily. "Grandpa did it."

No Publicity Wanted.--Employees who failed to receive an expected promotion July 1, may be in a position to appreciate this. A man was attacked by two highwaymen and put up a terrific fight. Finally he was overcome and searched. All the robbers could find was ten cents. They were amazed. "Say," said one of them, finally, "do you mean to say that this dime is all you have--that you put up a fight like that for a measly ten cents? Why, we almost had to kill you."

"Well," said the victim, "the truth of the matter is that I did not want my financial condition exposed."

Vacation Experiences.--A little fellow had been sent to his uncle's farm for the summer months. He was much taken with the things he found there and was especially attracted to a fine colt. He asked his uncle to give him the colt.

"That is a valuable colt," explained the uncle, "and I could not afford to give it to you."

"I'd rather have that colt than anything else in the world," declared the little boy, earnestly.

"If you want a colt as much as that," said his uncle, "you ought to pray for one. Whenever I want a thing that much, I pray for it, and then I am sure to get it."

"Is that so, uncle?" said the boy, eagerly. "Won't you please give me the colt, then, and pray for another one for yourself?"

Religious Note.--In a small town a new letter box had been put up and the children were gathered around it trying to decide to whom it belonged. "It must be the minister's," said one. "No, it can't be for the minister," contradicted another. "Don't you see what it says on it: 'NO COLLECTION ON SUNDAYS'?"

PERSONAL MENTION

J. R. Magnoss made a short trip to Lancaster and State College, Pennsylvania, the first week in September, inspecting nut-plantings at Lancaster to determine the feasibility of experimental work; and visiting the fruit experimental plots at State College.

W. W. Aldrich is visiting points in Virginia, Maryland, New York, etc. to conduct investigations relative to the handling, precooling and transportation of apples for export, accompanying test shipments from points of origin to ports of exportation and is to accompany shipments across the water.

L. M. Blank is planning a visit to Idaho, Washington, Oregon, Utah, Colorado and Kansas as an extension of a present trip to study diseases of cabbage and onions, collect specimens, and isolate causal organism for further laboratory studies, etc.

G. P. Rixford, associate physiologist, who retired August 31, is the subject of an extended notice in the August 16 issue of the California Cultivator which comments on his astonishing activity at the age of 92. Mr. Rixford has a small farm and experimental tract at Los Altos, Santa Clara County, California, where he is testing out many interesting subtropical plants. He has been able to grow Anona cherimoya trees without protection, and has a number of other tender plants--lemon guavas, strawberry guavas, sapotes, and Passiflora edulis, as well as avocados, etc.

Guy E. Yerkes attended the meeting of the Southern Nurserymen's Association at Ocean View, Virginia, September 10-11, giving an informal talk on rose stocks for outdoor Hybrid Teas.

H. F. Bergman attended the meeting of the Massachusetts Cranberry Growers' Association at East Wareham, Mass. on August 26, reading a paper on "Indicators of the Oxygen Content of Water."

Freeman Weiss left Washington early in September for a three-weeks' trip to points in Pennsylvania and New York to inspect rose test experiments, aster wilt, etc.

Victor H. Boswell made a short trip to Ithaca, New York, late in August to visit variety type plots of tomatoes.

George C. Husmann is making a somewhat extended trip through Illinois, Oklahoma, Missouri, California and other States in connection with a survey of the present condition of experimental grape plantings, preliminary to the preparation of a report of this work.

A revised edition of "Marketing Farm Produce by Parcels Post," (Farmers' Bulletin No. 1551) is now available for distribution.

"Producers and consumers will find in this bulletin information as to possibilities of marketing farm products by parcel post. Marketing by parcel post, within its limitations, is a useful means of marketing and this publication will supply those interested with compact information concerning postal regulations and requirements, containers, etc.

Nellie E. Brown, who has been working on the Pacific Coast this summer, plans to stop at Madison and other points in Wisconsin on her way back to her permanent headquarters at Washington, D. C., for consultation with officials in regard to crown gall investigations, etc.

B. G. Chitwood spent a few days early in September in Delaware and Maryland investigating strawberry dwarf disease, collecting specimens of diseased plants, and conferring with officials of State Experiment Stations concerning this disease.

D. F. Fisher visited New York City September 4 for a conference with officials of the International Apple Shippers' Association and steamship lines in connection with the apple export investigations of the office.

Though absent in Europe at the time, Neil E. Stevens was represented on the program of the meeting of the Massachusetts Cranberry Growers' Association, August 26, by a paper which discussed future work on the cranberry false blossom problem.

C. A. Reed is visiting points in Maryland, Pennsylvania and Delaware to procure varietal data in nut-bearing orchards.

H. B. Walker left Washington on September 7 for a two-weeks' trip to Babylon and Yonkers, New York. At Babylon he assisted in planting bulb experiments; and at Yonkers took experimental records on the work in progress there.

Jos. L. Kelly made a trip to Long Island from his Toms River, New Jersey, headquarters, to assist in a survey of Long Island Cranberry bogs for cranberry false blossom.

M. C. Parker spent the early part of September in Wisconsin, inspecting bean breeding and selection experiments at Manitowoc and New Richmond.

at request be furnished all prospective drivers of the equipment if their names are supplied the insuring company. Any Government employee who drives the insured car or truck is within the coverage so long as he operates lawfully, that is, in conformity with the laws and ordinances governing motor operation of the territory, such as those with respect to licensing, age, etc. While it is to be expected that benefitting employees will pool funds for the premium, the arrangement will be strictly a matter of agreement within the group; that is to say, the insurer is not interested in the number of contributors, and the protection of the employee using the equipment is not dependent upon contribution. The plan is described in letter from Reitan-Lordahl and Company to the Department of May 8 in the following language:

'Our plan of underwriting is roughly as follows: the master policy is issued in the name of "Officers and Employees of the Federal Government of the United States as herein limited." The limitation mentioned consists in limiting coverage to Government employees who are driving Government cars when such cars are endorsed for coverage on the master policy. As each application for insurance is received with the proper information concerning the cars involved, we attach an endorsement to the master policy and mail a copy of this endorsement with the certificates to the person making application. It is this person to whom we usually look for the payment of the premium, and he usually pro-rates the cost among all the men who drive cars in question.

'We charge the standard rate for the territory and car involved, minus a fleet rate of 15%. At the end of the term for which the cars are insured (one to twelve months) we return to the applicant the standard 25% dividend which has been paid ever since the Company's organization in 1912.

'This policy is issued through the Lumbermen's Mutual Casualty Company of Chicago, a company with nearly \$12,000,000 in assets whose financial statement we enclose. Since the company has claim representatives within easy reach of almost every locality in the United States and Canada, we are able to offer you prompt service at any and all times.'

"The amount of the premium and amount of return dividend in a given instance are shown in extract of letter from the company to an employee of one of our bureaus who arranged insurance in the interest of a group at a field station.

'The premium covering \$5,000-10,000 of public liability and \$5,000 property damage for the period specified is \$6.38. At the end of the policy period, there will be returned to you a dividend of \$1.59, which will make the net cost \$4.79. It is customary in insuring these cars for the leader of the group to pro-rate the cost among the drivers.'

"The scope of the coverage is shown by the following extract from the policy:

'The terms and conditions of this policy are so extended as to be available, in the same manner and under the same conditions as they are available to the named Assured, to any person or persons while riding in or legally operating any of the automobiles described in the Special Conditions, and to any person, firm or corporation legally responsible for the operation thereof, provided such use or operation is with the permission of the named Assured, or, if the named Assured is an individual, with the permission of an adult member of the named Assured's household other than a chauffeur or a domestic servant; except that the terms and conditions of this paragraph shall not be available to a public automobile, garage, automobile repair shop, automobile sales agency, automobile service station, and the agents or employees thereof.'

"It is assumed that this plan will interest only employees at field stations where one only or a limited number of cars are used by several employees. Those who desire to look further into this opportunity should as a first step select one of their group to correspond with Reitan-Lerdahl and Company, describing the equipment. There will be sent in response questionnaires or application forms bringing out the information necessary for quotation of a premium rate. Remittances will be made directly by the interested employees to the company; the master policy will be filed in the company's offices at Madison. The insurance is understood to apply solely to Department-owned equipment officially operated.

"The circulation of the above information is unofficial and should not be interpreted as implying any endorsement or recommendation of Reitan-Lerdahl and Company or any intimation that the insurance plan which they offer is preferable to what may be elsewhere obtained. The information is given out in view of the receipt of many inquiries from field officers as to the possible existence of an opportunity to insure individual trucks or automobiles for the benefit of groups of users and the prevalence of an opinion that under certain conditions this may be more economical than the personal coverage. It happens that the offer of Reitan-Lerdahl and Company is the first proposal which has come to the attention of the Department of such scope as to be available to all employees and in all locations.

W. W. Stockberger,
Director of Personnel
and Business Administration."

7/21/30

PRESQUE ISLE, "Regarding the late blight situation," writes P. M. MAINE. Lombard, associate horticulturist, "fields that went down early are not giving a very large yield and the grade is not so good. These fields are not showing as much blight or rot infection as those that hold up longer."

"Irish Cobblers are running from 10 to 15 per cent rot and Green Mountains estimated by digging several places in fields (this information on Green Mountains from county agent) run from 20 to 25 per cent rot. Reports on Irish Cobblers run from a few tubers to 50 per cent rot."

"I do not know that any Green Mountains have been harvested to date (September 9), other than digging several hills at various places on the fields."

"I should judge that the actual rot on all varieties would be at least 20 per cent of the crop. This may be low but I do not feel that it is high."

GREELEY, "During the past week (September 9)," reports W. C. Ed- COLORADO. mundson, horticulturist, "the weather has been cool and partially cloudy, with occasional rains. Much of the third cutting of hay is down at the present time and the weather has been very unfavorable for its curing. The sugar beet crop of the district is very good this year. Harvesting of beets will start about September 27."

"The late potato crop is looking very promising at the present time. It is believed that both the quantity and yield will be good this year. However, it will require about two weeks more of good growing weather to complete the late crop. Last year a freeze on September 8 cut the yield of the late crop about one-third."

"The seedling potatoes at the station have made a very satisfactory vine growth after all. Some difficulty was experienced when the young plants were set in the field, owing to the very hot weather in June, but the plants that survived have made a strong vine growth."

"Weld County will hold a junior fair September 11. The junior fair will take the place of the regular county fair. Last year the junior fair was very successful and it is believed that the fair this year will be much larger and better."

GREAT PLAINS A. C. Hildreth, superintendent, reports that general HORTICULTURAL construction work on dams, etc. is progressing satisfactorily. Foreman and staff came down from the Dayton FIELD STATION. Greenhouse Manufacturing Company, Dayton, Ohio, the middle of September to begin preliminary work on the greenhouse at the station. Tractor disking of the newly broken land on Section 16 continues and teams are at work leveling mounds and hummocks in the Shelterbelt area.

"Tomatoes are ripening in the dry-land test rows," he writes, "and an abundance of sweet corn, string beans, cucumbers, summer squash, etc. is available for use of the mess hall. A few ripe melons have been harvested.

"Mr. Andrew Larson, collaborating landscape architect, spent a few days at the station the second week of September. Tulip beds have been laid out and a planting of bulbs received from the U. S. Bellingham Bulb Station were put in the week of September 15. The lawns continue green as there has been no killing frost to date --September 20th -- Last year the first killing frost was on September 5th.

GARDEN INSECTS "Many insect pests of the vegetable garden find protection under boards, stakes and other loose materials IN HIDING. left in the garden during the winter," says a Department news release. "These should be cleaned up. The dead vines or dead leaves of the crop plants may harbor diseases and insects which will attack the crop the following year. As soon as the crop is removed all plant remains should be turned under deeply and thoroughly in order to check the development of certain insects and diseases. If a crop is known to have been badly infested by insects or diseases, it is safer to remove the plant remains and burn them even though this involves a loss of organic matter which, under ordinary conditions, should be returned to the soil. If the crop remains are removed and burned it becomes doubly necessary to supply organic matter to the soil in the form of manure, or green manures grown specifically for that purpose."

GROWING BAKED The Associated Press reported under date of September POTATOES. 21, that Henry Habersaat of Waupaca, Wisconsin, had found that he was growing a crop of baked potatoes! A fire burning in peat beds near his farm crept underneath the plants and he had a whole field of baked potatoes!

THAT REMINDS ME--

THAT when purchasing items such as cameras, calculating machines, typewriters, microscopes, objectives and oculars, where these are to be shipped direct to men in the field, the serial numbers of the cameras, shutters, lens, typewriters, calculating machines, microscopes, objectives, oculars, etc. should be reported to Mr. Swartz immediately upon receipt of the equipment. This information is needed both for the records of the Bureau's Property Room and our own inventory section.

THAT those in charge of field stations or offices must bear in mind the importance of submitting in DUPLICATE compensation commission forms covering injury in performance of official duty.

THAT for ordinary uses all makes and grades of automobiles are for consideration in determining which will best meet the needs of the service and bids should be requested on specifications, not by designation of a particular make, but should show only such details as to construction in performance requirements as can satisfactorily be shown to be necessary to meet the requirements of the service. Non-essential features such as shock absorbers, instead of some other similar devices, and non-shatterable glass in the windshield, instead of some other glass, should not be made controlling if the work reasonably can be performed with automobiles not having such features or equipment. Mr. Swartz can furnish complete ruling of Comptroller on this subject--A-31901, 9 Comp. Gen. 519, Advertising-Bids-Automobile-Specifications-Non-essential Features. The controlling element in the decision is that of the job to be done--the work necessary to be performed and the request for bids should, by specifications or otherwise, fairly reflect the actual need, and the equipment to be had at the lowest price that will serve the purpose is that which alone may be legally purchased.

THAT the Secretary of the Navy has made available to all activities of the Federal Government the services of inspectors of naval materials--per Circular Letter No. 33, Office of the Chief Coordinator, dated August 27, 1930.

THAT the Act of April 23, 1930, Public No. 165, 71st Congress, has fixed a uniform date of retirement--to take effect on the first day of the month following the month in which said retirement would otherwise be effective. That is, if retirement age is attained October 4, the actual retirement can not begin until November 1 and the employee is carried on the roll (on active duty, on leave, or on leave without pay) until that date. (P.B.A. Circular No. 160, August 6, 1930). No service credit is given for the extra period, however. By decision A-21625 of August 16, 1930, the Comptroller General has ruled that retirement deductions should be made from all pay accruing down to the actual retirement on the first of the month.

EDITORIALLY SPEAKING. John A. Ferrell

AGRICULTURAL DEPRESSION. Agricultural depression and the grievance of the farmer against the world at large, and those incarcerated, is not exactly a new condition of things but perhaps some of us have not appreciated how far back the situation extends. Dr. D. N. Shoemaker has recently shown me a copy of the Maryland Farmer for September, 1875, which throws some light on the situation, quoting the opinion of an observer on the Cincinnati Times of that day on the subject. The latter appears to have gone rather deeply into the question.

"The basest fraud on earth is agriculture," he asserts. "The deadliest ignis fatuus that ever glittered to beguile and dazzle and betray, is agriculture. I speak with feeling on the subject, for I have been glittered and beguiled and dazzled and destroyed by this same arch deceiver.

"No wonder Cain killed his brother. He was a tiller of the ground. The wonder is that he didn't kill his father, and then weep because he had no grandfather to kill. No doubt his Early Rose potatoes, for which he paid Adam \$7.00 a barrel, had been cut down by bugs from the headwaters of the Euphrates. His Pennsylvania wheat had been winter killed and wasn't worth cutting. His Norway oats had gone to straw and would not yield five pecks per acre, and his black Spanish watermelons had been stolen by boys, who had pulled up the vines, broken down his patent picket fence, and written scurrilous doggerel all over his back gate. No wonder he felt mad when he saw Abel whistling along with his fine French merinoes worth \$8.00 a head, and wool going up every day. No wonder he wanted to kill somebody, and thought he'd practice on Abel.

"And Noah's getting drunk was not at all surprising. He had become a husbandman. He had thrown away magnificent opportunities. He might have had a monopoly of any profession or business. Had he studied medicine there would not have been another doctor within a thousand miles to call him 'Quack'; and every family would have bought a bottle of Noah's Compound Extract of Gopher Wood and Anti-Deluge Syrup.

"As a politician, he might have carried his own ward solid, and controlled two-thirds of the delegates in every convention. As a lawyer, he would have been retained in every case tried at the Ararat Quarter Sessions, or the old Ark High Court of Admiralty.

"But he threw away all these advantages and took to agriculture. For a long time the ground was so wet that he could raise nothing but sweet flage and bulrushes, and these at last became a drug in the market. What wonder that when he did get a half-peck of grapes that were not stung to death by Japhet's honey-bees, he should have made wine and drowned his sorrows in a 'flowing bowl?'"

 IN A LIGHTER VEIN.

THAT'S DIFFERENT.--In connection with the extensive building operations about the Department of Agriculture at Washington, they are reviving an old story to the effect that a contractor who professed to be very fond of children was overheard scolding some youngsters quite severely for walking over one of his newly finished concrete walks before it had hardened. A friend rebuked him, remarking, "I thought you loved children?" The contractor nodded. "I do, in the abstract," he said, "but not in the concrete."

BREVITY

If you have something to say--say it!
 Boil it down until it simmers,
 Polish it until it glimmers;
 If you have anything to say,
 Don't take half a day--
 SAY IT! --Nat'l. Nurseryman.

A FAMILIAR MELODY.--The farmer had two hobbies--fine poultry and good music, so that the family received a liberal education in both. Over the radio the other evening, as the family group sat listening, came a brilliant solo by a famous soprano. The little daughter of the family listened attentively to the runs of the bewildering music until the singer struck some high notes and trills at the close, when she cried out excitedly: "Daddy! Listen! She's laid an egg!"

HINTS TO PARENTS.--Returning home from the dentist's where he had gone to have a loose tooth drawn, little Raymond reported as follows: "The doctor told me 'fore he began that if I cried or screamed it would cost me a dollar, but if I was a good boy it would be only fifty cents."

"Did you scream?" asked his mother.

"How could I?" replied Raymond reproachfully. "You only gave me fifty cents."

DIAGNOSIS.--It is just as well not to be specific in the matter of names, but the little daughter of Dr. X-- came to her mother the other day to complain "Ums," she said, "I've got a stomach ache." "That's because you haven't had lunch yet," explained her mother. "Your stomach is empty. You would feel better if you had something in it."

When the doctor arrived home from the Department that evening he happened to mention that he had a tough day--what with budget meetings and the like. "My head aches terribly," he said to his wife. It was the little daughter who replied. "That's because it's empty," she said, brightly. "You'd feel better if you had something in it."

PERSONAL MENTION

D. F. Fisher made a short trip to points in New York and New Jersey the latter part of September, to inspect experimental shipments of oranges, lemons and grapes.

Memorandum No. 1 of the Federal Drought Relief Commission, dated August 30, 1930, reminds us that Dr. V. R. Boswell has been designated to supervise the emergency gardens work of the Commission.

T. Ralph Robinson left Washington, D.C., September 27th for a trip to the Gulf Coast and Florida, to inspect the work on the breeding and testing of citrus fruits. He plans to attend a special meeting of the Florida State Horticultural Society at Marianna, Florida, October 14-15, giving an informal talk on new hardy Satsuma orange seedlings of false hybrid origin.

The OFFICIAL RECORD of September 18th had this to say of a member of our staff: "Mr. Frank L. Goll, senior physiologist of the Bureau of Plant Industry, has returned to Washington after 18 months in Spain as representative of the department at the Ibero-American Exposition held this year in Seville. Mr. Goll also was the official delegate for the United States at the International Congress of Tropical and Subtropical Agriculture and the Coffee Congress, Seville. That the department was creditably represented at the exposition is apparent from a letter recently received by C. W. Warburton, director of extension work, from the acting secretary of the Seville Commission, which says: 'Mr. Goll's efficient cooperation has been so clearly evident that I cannot let this opportunity pass without expressing to you my extremely high regard for the most capable way he attended to his responsibilities. Not only did he complete his own work most efficiently, but his loyalty and interest were demonstrated by his quickness to volunteer for any service which presented itself.'"

W. R. Raleigh is transferring his temporary headquarters from Yonkers, New York, to Washington, D. C., where he will continue his investigations on potato diseases.

Freeman Weiss's investigations on narcissus basal rot control have received an enthusiastic reception from florists. "This is real progress in the narcissus industry," says the FLORISTS EXCHANGE, commenting on a report in its September 20th issue by Dr. Weiss. We expect to have a review of this in the NEWS LETTER shortly.

Lauriston C. Marshall spent September 19 and 20 in Washington, conferring with officials of the Bureau and the Smithsonian Institution relative to cooperative work in the development of special plant propagating equipment utilizing heating and refrigerating units.

G. B. Ramsey spent the third week of September in the canning factory districts of Indiana, studying diseases of tomatoes. He reports that the principal diseases observed were anthracnose, bacterial spot and soil rot. This year's crop was good in most sections and Federal-State inspection is proving highly satisfactory. There were 40 canneries taking inspection this year and there are prospects of 60 or more requesting inspection next year.

Recent visitors at the Market Pathology Field Laboratory, Chicago, were Dr. H. C. Fawcett of California (returning from Cambridge); Dr. Charles Brooks (returning from the West Coast); and Dr. H. W. Anderson of the Department of Pomological pathology, Illinois Experiment Station.

Robert H. Peebles, who has been assisting in some special propagating work on citrus plants at the U.S. San Diego Acclimatization Garden greenhouse operated by this office at Torrey Pines, California, has returned to his permanent headquarters at the U.S. Field Station, Sacaton, Arizona, and writes: "Conditions are excellent and probably the best for ripening dates in years. The palms look unusually well and the 200 or so offshoots planted this spring appear to be in excellent condition."

T. M. Whiteman left Arlington Farm late in September for a trip to points in New York, New Jersey, Connecticut and Massachusetts, to inspect experimental shipments of oranges, lemons and grapes.

J. R. Winston left September 23 for Orlando, Florida, to conduct investigations on the handling and coloring of citrus fruits. He had just returned from a two weeks' trip covering points in Maryland, Virginia, West Virginia and on to New York City to assist in arranging a shipment of apples for export.

"American Medicinal Plants of Commercial Importance," written by A. F. Sievers of the Bureau of Plant Industry, and issued as Miscellaneous Publication No. 77-M in the Department's series, describes 128 plants of medicinal value and commercial importance and indicates methods of handling.

The Department's fall and winter recreational activities were inaugurated with the opening of the Agriculture Interbureau and Economics bowling leagues late in September, bowling having become one of the most popular recreations among our workers. John A. Ferrall captains the team representing the Bureau of Plant Industry in the Interbureau circuit (made up of teams representing the various bureaus), while Emmett C. Scott leads the Horticultural Crops & Diseases quint in the Economics league.

THE OFFICE OF HORTICULTURAL CROPS AND DISEASES

SEMI - MONTHLY NEWS LETTER

The official Organ of the Office of Horticultural Crops and Diseases,
Bureau of Plant Industry, United States Department of Agriculture.

John A. Ferrall, Editor

This NEWS LETTER is for distribution only to employees of the Office and the material in it is of an informal and confidential nature and is not to be published without the prior approval of the Office of Horticultural Crops and Diseases.

Vol. II

Washington, D.C., October 15, 1930

No. 20

NARCISSUS The Department's DAILY DIGEST recently quoted from an
BASAL ROT editorial in THE FLORISTS EXCHANGE: "The promised second
CONTROLLED. report on the use of fungicides in connection with the
 hot water treatment of narcissus bulbs, by Dr. Freeman
Weiss of the U. S. Department of Agriculture, is in hand and as we go
to press we receive authorization from the Bureau of Plant Industry to
publish it in our issue of September 20. This should still be in time
to be of value to some growers who have not yet treated their 1930
stock. 'Further evidence,' writes Doctor Weiss, 'has been secured un-
mistakably showing great multiplication of basal rot through the hot
water treatment when applied without the simultaneous or subsequent use
of a fungicide....The variety of effective fungicidal treatments makes
it possible to choose a reasonably economical method for application on
any desired scale.' This is real progress in the Narcissus industry."
The italics are ours. A gist of Dr. Weiss' report follows:

Narcissus basal rot, one of the most severe diseases of bulb grow-
ers on Long Island and in Virginia, is the latest malady to fall victim
to the incessant hounding of Federal plant pathologists. As a result
of his experiments, Dr. Freeman Weiss, pathologist, announced in the
September 20, 1930, number of the FLORISTS EXCHANGE that the spread of
narcissus basal rot through the enforced hot-water treatment of bulbs,
as required by the quarantine regulations against the Narcissus celworm,
can be readily overcome. Not only does the addition of chemical fungicides
to the treating solution control the basal rot, states Doctor Weiss,
but it also has a decided effect on the spring growth, flowering,
length of the growing season, the amount of rot which occurs in the
field before harvest and in subsequent storage, and on yield as
measured by the amount of increase. This advantage fully compensates
for the added cost of the treatment.

Further to verify previous assertions based on preliminary work that it is the required celworm treatment that is responsible for much of the spread of Narcissus basal rot, Doctor Weiss compared the results of treating 450 pounds of each of six narcissus varieties with the hot water without added chemical and 450 pounds of the same original lot but with the chemical. Despite practically complete stands and comparable flower production in both the treated and the untreated lots in the spring of 1930, Doctor Weiss states, the amount of basal rot observed in the crop, especially during the storage period, was consistently three to five times as much as in the treated than in the untreated lot.

The chemical treatments were varied in many ways and tried on different susceptible varieties of bulbs in several localities and, although no single chemical in a particular concentration has consistently proved to be superior, there has been surprisingly little injurious effect together with results generally equal and superior to those from the untreated bulbs. On Long Island, Dr. Weiss says that treating with mercuric chloride, formaldehyde, Semesan, and Ceresan, resulted in an increase of from 23.1 to 74.8 per cent in the crop, an increase more than offsetting the additional financial outlay for the treatment. In Virginia, even greater advantages were given, increases of the crop running from 56.6 to 128.2 per cent.

In order to determine whether this increase was solely due to the reduction in basal rot or to other factors, Doctor Weiss treated Lady White Narcissus bulbs, a variety resistant to the ravages of the disease, and found that while no basal rot appears, the increase of the crop ranged from 26.5 to 70.5 per cent.

Cold liquid treatments, as well as dusts, also resulted in decided improvement as shown by the increases obtained in the several crops.

The fungicidal treatments, Doctor Weiss suggests, are intended to be used just as in the unmodified hot-water treatment (2-1/2 to 3 hours after the temperature reaches 110° F., and during which a temperature of 110 to 111° F. is constantly maintained.) The usual precautions must be observed in regard to treating the bulbs only after a period of curing from two to five weeks after they are dug, and before root growth begins.

For the hot water and fungicide treatment combined to be used in wooden tanks, where all metal parts are well coated with a high melting-point, mercuric chloride, 4 ounces to 30 gallons; is the only recommendation. This treatment should be renewed by adding enough double strength bichloride solution after each treating to restore the amount

of liquid to the original volume. However, the entire solution should be discarded after every four treatings and replaced with freshly made up disinfectant. For unprotected metal tanks, Somesan, one pound to 50 gallons; Ceresan, one pound to 25 gallons; or formaldehyde, one pint of the 40 per cent commercial material to 50 gallons should be used.

In making the hot water and the fungicidal treatments separately, the latter must be done immediately after the former and to avoid too great a change in temperature Doctor Weiss says the fungicidal solution should be made up with lukewarm water. It is best to plant immediately after treating, but if this is not practicable, the bulbs should be spread out in shallow trays and dried as quickly as possible. The suggested treatments for the control of basal rot by this procedure are Ceresan at the rate of one pound to 6-1/2 gallons of water and soaked for two minutes, or mercuric chloride, six ounces to 50 gallons of water without about half hour's soaking.

Immersion of the bulbs for two to three hours in a cold solution of mercuric chloride, four ounces to 30 gallons; for the same period in Semesan, one pound to 50 gallons; or for about two minutes in Ceresan, one pound to 6-1/2 gallons, are recommended by Doctor Weiss as fungicidal treatments without heat.

**

GREELEY, "The weather during the past week or ten days has been
COLORADO. cool and cloudy with occasional showers," writes W. C.
 Edmundson, horticulturist, under date of October 7. "The
weather has not interfered with potato or sugar beet harvesting, but
slow progress is being made with threshing beans. Some bean growers
have stacked their beans but probably the larger percentage is still
in the field. Considerable cabbage is being shipped at the present
time, but prices are very low, dealers offering but thirty-five cents
per cwt. for the best grade.

"Potato harvesting is well under way and the yields will be good. Some growth crack and hollow hearts were found in the crop, caused by spring rains. We have just about completed potato harvesting at the station. The quality of the crop was exceptionally good this year, and a very satisfactory yield was secured. The seedling potatoes produced at the station this year were the best the writer has grown since coming to Colorado. Some seedlings were also grown in the mountain area and these were of very fine quality, too."

PURCHASES WHICH MUST NOT BE MADE IN THE FIELD. Because several vouchers covering certain supplies or equipment necessary to be purchases from Government contractors have been returned from the Auditors recently, we are listing below, for the benefit of field employees, under "Class 1" supplies and equipment which must not be purchased in the field except in the case of extreme emergency; and under "Class 2" equipment which must not be purchased in the field under any circumstances:

CLASS 1.--Electric fans, electric bulbs, canvas and cloth bags, tires and tubes, and storage batteries.

CLASS 2.--Furniture, office machines, cameras and photographic equipment, fountain pens, brief cases and other articles of a personal nature, and typewriters.

Orders for all of the above should be placed through the Washington office. In addition to these, there are many items shipped on which there is a great saving by placing the orders with contractors. Among these are skid chains, spark plugs and other automobile accessories, electric equipment (other than mentioned above), and filing supplies. Many other articles which may be obtained on Government contracts can be shipped direct from the contractors' shipping points to certain field stations, when fairly large orders are placed, more reasonably than they can be purchased locally. A clause in the Government contracts allows for small shipments to be made FOB points in the field when the cost of transportation does not exceed what it would cost for the dealer to ship the articles to Washington, D.C. Under the circumstances, it is thought advisable, when ordering fairly large quantities of supplies in addition to those listed above, to send the order through the Washington office. If it is decided that no saving would be made by placing the order in this manner, the field station will be notified to proceed with the purchase.

PURCHASE OF TIRES AND TUBES. The purchase of tires and tubes in the field, under letters of authorization, is not permissible except in cases of emergency arising under conditions that could not have been foreseen. Vouchers covering such charges must be accompanied by a statement clearly indicating the particular condition which required the purchase to be made.

Those possessing Government cars will be sent a form about the first of each quarterly period (usually in July, October, January and April) on which to fill in their requirements for tires and tubes for the succeeding quarter. Careful consideration of future tire and tube needs should be given at that time and a statement of your needs should be returned promptly, otherwise your requirements cannot be included in the succeeding quarter estimates.

SECURE BIDS BEFORE PLACING ORDERS AMOUNTING TO MORE THAN \$50.

You are reminded that the Fiscal Regulations require that bids be secured from at least three bidders if possible, preparatory to placing an order for services (other than personal) or supplies or equipment amounting to more than \$50.00. Unless your letter of authorization specifies that you may secure bids, open them, and recommend acceptances to Washington, you should either request that the Washington office secure bids for you, or should ask that your authorization be amended to permit you to secure them. Whenever possible, it is preferred that you use the services of the Washington office to secure bids for you.

Invitations for bids should be sent out on Standard Form No. 33. They should be so worded as to convey a clear picture to the dealer of what is desired. Above all, there should be not the slightest variation in the language in the requests sent to the various dealers, as it is imperative that each have the same facts before him when he submits his bid.

Except in special emergencies, covered by specific authorization, all bids must be sent to Washington, where the Department Board of Awards will examine them and accept the one best meeting the Department's requirements. In nearly every case this will be the lowest bid. Your Washington office will then either draw a requisition on the dealer whose bid has been accepted, or will notify you in order that you may place the order under the authority of your letter of authorization. Under no circumstances should such an order be placed until this notification is received.

The regulations laid down by the Comptroller General concerning the necessity of securing competition are irrevocable and must be observed if you would protect yourself from personal loss, as vouchers covering such purchases cannot be passed without showing that these requirements have been complied with, or unless they are accompanied by a clear-cut and definite exigency statement showing that it was impossible to secure competition. This statement is to be signed by the employee under whose authorization the expense is incurred and is to be submitted in duplicate. A statement written on the back of the voucher is not acceptable.

We desire to do everything in our power to emphasize the importance of the various fiscal regulations, and especially to point out those, the non-observance of which may result in serious personal loss. It is believed that in doing this we are rendering a sincere service to the employee who must incur expense for the Department because to be "forewarned is to be forearmed."

THAT REMINDS ME-----

THAT project leaders should always send copies of any informal circular (mimeographed or otherwise) to Mr. W. W. Gilbert, so that his file of such publications may at all times be kept complete and up to date. Such circulars are usually delivered in bulk by the Office of Information to the project leader ordering them so that Mr. Gilbert sometimes fails to receive copies for his information.

THAT the Comptroller General has made an interesting decision recently concerning leave of absence without pay on Saturday afternoons--9 Comp. Gen. 514 - A-32125. In a ruling for the Civil Service Commission concerning one of its employees the Comptroller says: "In the absence of a regulation, a field employee of the Civil Service Commission who is granted leave without pay should be charged a full day for Saturday, regardless of the number of hours he would have been required to work if he had not been on leave." It seems that this employee was working at an office in the field where only three hours of service are required on Saturdays under authority of the regulations of the Civil Service Commission which permits a District Secretary to close his office on Saturday afternoon, if the public business permits, in a State in which Saturday afternoon is a legal holiday and where it is customary for Federal offices to close. "Manifestly an employee who has been granted leave without pay for a certain days," says the ruling, "and who performs no service on said day should not be paid for any part thereof, regardless of the number of hours the employee would have been required to work if he had not been on leave of absence."

THAT discussing compensation, allowances in kind and absence from duty, the Comptroller rules (9 Comp. Gen. 528--A.32292): "Under the proviso to section 3 of the act of March 5, 1928, 45 Stat. 193, it is within administrative discretion to determine the value of quarters, subsistence, and other allowances furnished in kind to civilian employees, to be considered as a part of compensation, either for the period of actual duty only, exclusive of periods of authorized or unauthorized absence, or for full time, including periods of authorized or unauthorized absence."

"Since the regulations of the Veterans' Bureau (for which the decision was made) have fixed the value of allowances furnished in kind to nurses in hospitals for period of actual duty only, there is no authority to reimburse nurses in cash the value of allowances for periods of authorized absence from duty when the allowances were available but not used."

THAT on page 195 of this issue you will find instructions reprinted from the December 1, 1929, NEWS LETTER concerning the necessity of securing bids before placing orders amounting to more than \$50.00. This is for the benefit of new employees--and some older ones who appear to have forgotten about this regulation.

EDITORIALLY SPEAKING. John A. Ferrall

INTERNATIONAL BOTANICAL MEETINGS. The members of the office staff who attended the International Botanical Meetings in England are beginning to return. The first survivor to meet the eye of the Editor, Dr. Neil Stevens, returned to Washington September 29th, just too late to receive notice in the October 1 issue. He reports that "A good time was had by all," and adds that of the 1,050 botanists who registered at the conference in Cambridge, almost one-third were from the United States. Apparently, however, the only time that the Department delegation was seen together was at the plenary session when the delegates from the various countries were officially received.

For some reason not yet explained, it appears that everybody else was announced as representing the United States Government, while Dr. Lee Hutchins was proclaimed as representing the "United States Government" in the first place and later on as representing the "United States Department of Agriculture." It is the Editor's belief that this special distinction was given Dr. Hutchins because of the prestige earned by his debut in the talking pictures last year!

It seems evident from Dr. Stevens' discussion of matters in connection with his trip abroad that in his opinion the Botanical Congress and the investigations of strawberry diseases by the British pathologists, which are receiving so much attention at this time, fade into insignificance in comparison to the fact that he collected at St. Ives the first specimen of *Physalospora* ever reported in Great Britain!

In spite of *Physalospora* collecting and the incidental attendance at botanical meetings, Dr. Stevens' efficiency system operated to prevent his being forgotten by the cranberry growers of the United States, as several of his papers made their appearance at growers' meetings. A paper on "The Relative Thickness of Cuticle in Different Varieties of Cranberries," written by him, was read at the meeting of the American Cranberry Association in New Jersey; while two were presented at the Cape Cod Cranberry Growers Association meeting--"What to do with Small Lots of Cranberries which Show Rot at Picking Time," and "Future Work on the False Blossom Problem."

To top off the discussion and give him the entire editorial, it is now reported that one of his expense account vouchers has caused considerable wonderment. It reads: "Osverada, Avordeos, Vechinovimome, 10s." Dr. Stevens' arrival paved the way for a solution as he insists that it is very simple, his translation of the dealer's bill reading as follows: "Horse for a day; hay for the horse; fetching him home, 10 shillings."

 IN A LIGHTER VEIN.

NO INCONVENIENCE AT ALL.--Scientists are presumed to be a trifle lacking in sentiment and hence the funmakers do not hesitate to hang a certain type of anecdote upon them. One story is to the effect that a scientific worker had married a young lady who was extremely sentimental and could not understand her husband's lack of enthusiasm over romantic movies and such. Aside from his official work, his sole diversion was golf. In fact it was difficult to tell which of the two was the vocation and which the avocation. "Would you mourn for me much if I should die." she was saying one evening, as she tried to awaken a trifle of sentimental response in him, "and would you visit my grave often?" "Of course," he replied with animation, but not looking up from his copy of SCIENCE. "I pass it on the way to the golf links, anyway," he added, as an afterthought.

 EXPLAINING HER RESIGNATION.

Irene Thomas, pretty typist,
 Really made a hit,
 With her new boss, Dave A. Myers,
 But she had to quit
 When she noticed on each letter
 She had written: D-A-M:it.

SPEAKING OF GOLF--According to the WALL STREET JOURNAL, a hustling young salesman was showing a customer some golf stockings. "Wonderful value, sir!" he exclaimed with enthusiasm. "Worth double the money! Latest pattern, fast color, holeproof, won't shrink--and that's a good yarn."

"Yes," said the customer, "and very well told."

POET'S CORNER.

Gaily did you tread the wine,
 White and fragrant smelling;
 Lightly did you hail that June,
 It's now secrets telling.
 And then warm summer captured you,
 With little listless sighs,
 And flushed your cheeks with purple red
 As faint as violet's eyes.
 But now your shriveled skin doth bear
 No trace of that lost June--
 Well may we mourn your beauty since
 You have become a prune!

---California Pelican

AUTO LIABILITY INSURANCE--A Short Story. Once upon a time there was a driver of a Government auto who struck a match to see if the gas tank was empty. It wasn't.

PERSONAL MENTION

Joseph L. Kelly left Toms River, New Jersey, early in October for a two weeks' trip to points in New York, Connecticut, Rhode Island and Massachusetts, to work on cranberry diseases and especially to make a final survey of the scattered cranberry bogs of Long Island and in Rhode Island, and to assist State and Bureau officials to determine on a possible quarantine to these areas.

J. B. Furr left October 10, for a trip to Ithaca, New York, where he expects to remain for some two months, conducting investigations on the relation of moisture supply to fruit development in apples.

Director C. P. Gillette of the Colorado Agricultural College, was a visitor at the Greeley, Colorado, potato experiment station late in September, primarily to inspect the spray plots for the control of the potato flea beetle, work being conducted by his department, and to discuss the possibility of some work on the controlling of psyllids.

Horticultural Crops and Diseases workers almost monopolize the issue of the Journal of Agricultural Research for August 15, 1930, this number containing "Corticium Centrifugum, a Heterothallic Pathogen of Apples," by L. F. Butler; "Some Conditions affecting the Storage of Peppers," by J. I. Lauritzen and R. C. Wright; "Experimental Studies on the Growth and Development of Strawberry Plants," by George M. Darrow, and "A Study of Some Unproductive Cherry Trees in California," by C. F. Kinman.

E. A. Gorman is spending three weeks at points in Maryland, Virginia and West Virginia, making arrangements for shipments of apples to be exported.

M. H. Haller is visiting points in these States also, conducting investigations on the effects of various cultural practices on the keeping quality of apples.

Speaking of apples, Mr. Gould was struck by a similarity between specimens of the Ortley apple (from Oregon) and the Cleopatra (from Adelaide, South Australia) and has conducted a series of checks and tests which make it appear that these two names have been applied to one and the same variety. He discusses the question briefly in Fruits and Gardens for October, 1930.

At the summer meeting of the Botanical Society of America, held at Friday Harbor, Washington, the office was represented by H. F. Bain and J. S. Cooley.

F. L. Mulford made a short trip to Brooklyn, New York, to advise the Commandant of the Brooklyn Navy Yard concerning the beautification of the grounds there.

James H. Beattie, associate horticulturist, is the author of a revised edition of Farmers' Bulletin No. 1431, "Greenhouse Tomatoes." The commercial production of tomatoes in greenhouses in this country, he points out, is a development of the last quarter of a century. Now, lettuce, cucumbers and tomatoes constitute perhaps 90 per cent of the products of the vegetable forcing-ranges throughout the United States.

C. A. Reed visited Baldwin, L.I. and other points in New York State, leaving Washington October 12, to procure further data regarding varieties of nuts ripening at this time, and especially those resulting from cross pollinations made last May.

Neil E. Stevens, just back from Europe, made a short trip to points in Virginia to conduct a survey for false blossom on cultivated cranberries.

"The United States Department of Agriculture--Its Growth, Structure and Functions," by M. S. Eisenhower, Director of Information, and A. P. Chew, Assistant to the Director, tells of the many kinds of practical assistance farmers and the general public may obtain from the Department, etc. This bulletin (Miscellaneous Publication 88-MB, U.S.Dept.Agr.) is sold by the Superintendent of Documents, Government Printing Office, Washington, D.C. for 25c a copy.

R. L. Newton is visiting points in New York and New Jersey to assist in work in connection with the export of apples.

Dean H. Rose is spending three weeks in these States, conducting investigations on freezing injury of apples, and to assist in experiments on the export of apples.

S. C. Mason, senior horticulturist, who has been working during the summer at Beaumont, California, has returned to his permanent headquarters at the U. S. Experiment Date Garden, Indio, California, where he will continue his studies on the growth of the date palm, identification of varieties by botanical characters, etc.

E. S. Schultz has transferred his permanent headquarters from Presque Isle, Maine, where he has been working, to Washington, D.C. He will continue his investigations on potato diseases and his temporary station will be changed from Yonkers, New York, to Presque Isle, Maine.

Farmers' Bulletin No. 1635, "Surface Irrigation in the Eastern States," has been issued to supersede Bulletin 899. It gives information that should be helpful to eastern farmers whose crops have suffered from drought.

THE OFFICE OF HORTICULTURAL CROPS AND DISEASES

S E M I - M O N T H L Y N E W S L E T T E R

The Official Organ of the Office of Horticultural Crops and Diseases,
Bureau of Plant Industry, United States Department of Agriculture.

John A. Ferrall, Editor

This NEWS LETTER is for distribution only to employees of the Office and the material in it is of an informal and confidential nature and is not to be published without the prior approval of the Office of Horticultural Crops and Diseases.

TRANSCONTINENTAL
AND OVERSEAS
SHIPMENTS, ETC.

A teacher in one of the lower grades of a public school was reviewing the lesson of a previous day and asked one of the boys to tell the name of an animal described in her talk the day before. He replied promptly, "The Warmer." Recovering from her astonishment, she protested, "But, William, that is absurd--there is no such animal." The little boy insisted that the "warmer" was the animal she had described. Finally, another little boy solved the puzzle. "Please, ma'am," he said, "it's just the way he talks--his father is an English butler. He doesn't mean to say warmer; he means otter."

The issue of SCIENCE for October 3, 1930, carried an item headed: "The First Transcontinental Fruit Transportation Laboratory," but it really doesn't mean to say that. What it describes is "The First Transcontinental Fruit Transportation Laboratory over the Chicago Great Western," since it describes the transcontinental fruit transportation laboratory brought to Chicago by that railroad, a test no different from many others conducted for years past by this office. Accompanying the train in a special car were four fruit handling and transportation specialists-- C. W. Mann, W. C. Cooper, C. E. Asbury and J. G. Gray-- who, during the trip, made continual tests and recorded the efficiency of refrigeration and ventilation equipment.

But while this is an old story, the NEWS LETTER is able to report the FIRST extensive work on the handling and transportation of Eastern fruit for overseas markets to be undertaken in recent years, and the FIRST instance in which test shipments have been accompanied by Department observers to study temperature changes en route from ports in the Eastern United States.

Dr. W. W. Aldrich returned from England on October 15. He sailed on the White Star Line M. V. "Brittanic" on September 13, accompanying test shipments of apples from the Shenandoah Valley and pears from Western New York. As stated, this is the first extensive work on the handling and transportation of Eastern fruit for overseas-markets to be undertaken in recent years, and the first time that test shipments have been accompanied by Department observers from ports in the Eastern United States. It is of interest to note, however, that the genesis of the present fruit handling, transportation and storage project was in the practical problems encountered by Dr. Wm. A. Taylor in the overseas shipment of apples and pears for display at the Paris Exposition in 1900.

The first assignment of Mr. H. P. Gould when he entered the Department's service in--well, some years ago--was in preparing experimental lots of Bartlett pears from Western New York, and a little later summer apples from Delaware, for export. Considerable work was done shortly thereafter by G. Harold Powell on the handling of fruit for export, and this eventually led to the extensive studies made on the handling of citrus fruit which brought the project into prominent attention.

During recent years the serious complaints which have been received concerning the condition of their apples arriving in English markets induced Virginia growers and shippers to secure a special appropriation for an investigation of the factors involved in such shipments. Besides the tests on the "Brittanic", additional experiments were conducted between Winchester, Virginia and Liverpool, England, in which experimental lots were forwarded with recording temperature apparatus on the White Star Line S. S. Baltic, sailing from New York City on September 20.

The work is now being conducted by Charles L. Powell, who accompanied test shipments of Virginia York Imperial apples on the "Brittanic" sailing October 11. Dr. Dean H. Rose and E. A. Gorman started additional tests on the "Baltic," which sailed on October 18. Mr. Powell will remain in Liverpool for about three weeks to receive and observe additional experimental lots and to study handling methods in English markets.

These overseas investigations have been made possible by the splendid cooperation of the White Star Line, which has rendered every assistance to our staff and extended special courtesies to our men on the trips across the ocean.

Of course, in the transportation of perishables, both transcontinental and overseas, the accurate control of refrigeration and ventilation is vitally important, and the tests made on such trips as those described are certain to yield data of the utmost value to growers and shippers.

SPRAY RESIDUE REMOVAL. J. M. Lutz has returned from points in the Middle West where for the past two months he has been engaged in spray residue removal work. On account of the lack of usual rains during the past season, the spray residue problem became acute in many Eastern and Middle Western apple-growing regions. It became necessary to install washing machines and other cleaning equipment on rather short notice. The situation resembled that which prevailed in the Pacific Northwest a few years ago, but in the present case there were two important differences: (1) the problem had been pioneered in the Northwest and essential information was available for the guidance of the Eastern fruit industry; and (2) in some localities there was no water available because of the protracted drought.

In the application of available information and in the organization of fruit cleaning operations so that harvesting and packing could proceed with confidence and without serious interruptions, personal service was needed. The fruit handling project of the office met this situation by dispatching Mr. Lutz to Southern Illinois early in September. Later he went to Arkansas, Missouri, Kansas, Kentucky, Indiana and Ohio.

Mr. Lutz had had considerable experience in spray residue removal work in the Pacific Northwest and besides the personal service he was able to give to growers and packers, he gave intensive instructions to the county agents and other extension workers whose services were enlisted in the emergency. By working through these agencies it was possible to carry needed information to practically all of the commercial interests involved. Large numbers of homemade washers were built from plans furnished by the office and several thousand copies of our mimeographed circular on "Removal of Spray Residue from Apples and Pears," were distributed. In the Shenandoah Cumberland region, H. H. Haller rendered similar service during a short period.

In addition to spray residue work on apples, Mr. Lutz conducted some pioneer investigations on the removal of arsenical residue from grapes in the region of Sandusky, Ohio, where it has become a serious problem on account of the heavy spraying to control the grape berry moth.

GREELEY, COLORADO. "The weather to date," reports W. C. Edmundson, October 23, "has been quite favorable for harvesting crops. The temperature at night dropped to 19 recently but very little damage was noted. The potato harvest is practically finished and a large part of the crop placed in storage. Very few potatoes are moving to market at the present time. The district produced a large crop of field and seed beans. While much of the bean threshing has been done, only a part of the large acreage of unthreshed beans has been stacked. Sugar beet harvesting is proceeding rapidly and it is believed that 50% of the large acreage has been harvested.

CENTRAL "Backfilling and rolling the puddle trenches for
GREAT PLAINS the dam was finished the forepart of the week," writes
FIELD STATION. A. C. Hildreth, superintendent, under date of October
18. "The spillway has been excavated and earth is
being placed and rolled in the embankment under the direction of Mr.
Carl Rohwer. Mr. R. L. Parshall, Sr. Irrigation Engineer, came up
from Fort Collins, Colorado, on the 17th to inspect the work.

"The greenhouse crew has been engaged during the week setting
the steel framework, painting wooden frame parts, etc. The smokestack
is well under way, now emerging from the roof of the headhouse. This
should be finished the forepart of next week if weather conditions con-
tinue favorable. Another carload of material is expected tomorrow and
the heating plant, shipped several days ago, also should be in early
next week.

"Potatoes and other root crops were dug before the low tempera-
tures. About 350 bushels of four varieties of potatoes, all of good
quality, have been stored in the root cellar, and carrots, turnips,
parsnips, etc. totaling about fifty bushels, also have been stored.

"A carload of oats was unloaded the 17th. Other work through
the week consisted of leveling off for the greenhouse floors and re-
moving excess dirt from about the greenhouses; dragging the station
roads and grading up low spots in the service road from the main drive-
to the experimental plots. Storm sash have been put on all the dwell-
ings, and will be put on the office, mess and bunkhouses next week.

"Mr. A. T. Sweet, Associate Soil Scientist of the Bureau of
Chemistry and Soils, who arrived at the station from Fort Lupton,
Colorado, the week of October 5, has completed field work for a soil
survey of the station, returning to Fort Lupton on October 15, where
he will write up the results of his work here.

"Mr. Matt Christenson, President, and Mr. Mason, Secretary, of
the Federal Business Association of Cheyenne, accompanied by Dr. J.
T. Dallas, Associate Veterinary Inspector, Bureau of Animal Industry,
visited the station on the 15th.

"Dr. J. R. Magness, Principal Horticulturist, inspected the sta-
tion on the 17th and visited Archer Field Station in the afternoon,
leaving that night.

"Messrs. Hildreth, Babb and Emerson returned from a trip through
the Dakotas, Minnesota, Iowa and Nebraska the evening of the 17th."

MOTION PICTURES. Bureau of Plant Industry Memorandum No. 527, dated September 18, 1930, reads: "Considerable difficulty has been experienced in connection with the performance of minor service for the Bureau by the Office of Motion Pictures, particularly in connection with the recording of liabilities and final charges for the work.

"It is requested that in order to avoid confusion in our records, requests for work to be done by the Office of Motion Pictures should be submitted through the regular bureau channels on the photographic request form now in use. After approval of the requisition it will go through our Bureau Property Room, where arrangements will be made to have the proper liability set up. It should be understood, of course, that no work should be arranged independently between the offices and the Office of Motion Pictures until the requisition has been approved and properly recorded.

"Offices contemplating the preparation of motion film stories by the Office of Motion Pictures, or cooperation upon motion pictures or related subjects proposed by other Bureaus or Department agencies, should submit to the Chief of Bureau for approval the information outlined in B.P.I. Memorandum 368, July 20, 1928, and no liabilities should be incurred or work done toward preparation of the film until the office has been advised in writing of the approval of the Chief of Bureau. It is requested that all individuals concerned with the development of motion pictures, review B.P.I. Memorandum 368 so that they may be thoroughly familiar with the procedure involved.

"It is not desired at this time to change the procedure in developing motion film stories, but merely to emphasize the necessity for handling miscellaneous requests on the Office of Motion Pictures through regular Bureau channels."

In order that the terms of this memorandum may be carried out--and requests for such work submitted through regular Bureau channels and on the standard photographic request form now in use--members of our personnel should advise Mr. L. O. Gillette whenever they have work to be done by the Office of Motion Pictures. He will have the necessary requisition drawn and will, if desired, notify the person requiring the work when and if the order is approved, so that any necessary arrangements may be completed.

A copy of Bureau of Plant Industry Memorandum No. 368, referred to above, may be obtained from Mr. Swartz.

Remember--"...no work should be arranged independently between the offices and the Office of Motion Pictures until the requisition has been approved and properly recorded."

AUTOMOBILE LIABILITY INSURANCE. In connection with the matter of automobile liability insurance, and in particular group insurance for Department motor vehicles, we are quoting below a letter from the Director of Personnel and Business Administration, dated October 6th:

"Ralph W. Lee and Company advise that their group insurance rates for the year beginning November 1, 1930, will be \$8.00 for personal injury damage up to \$5,000 for one and \$10,000 for two or more persons and for property damage up to \$5,000. For personal damage up to \$10,000 for one person and \$20,000 for two or more persons and property damage up to \$5,000, the charge is \$9.60.

"Recapitulating what was stated in a former circular on this subject:

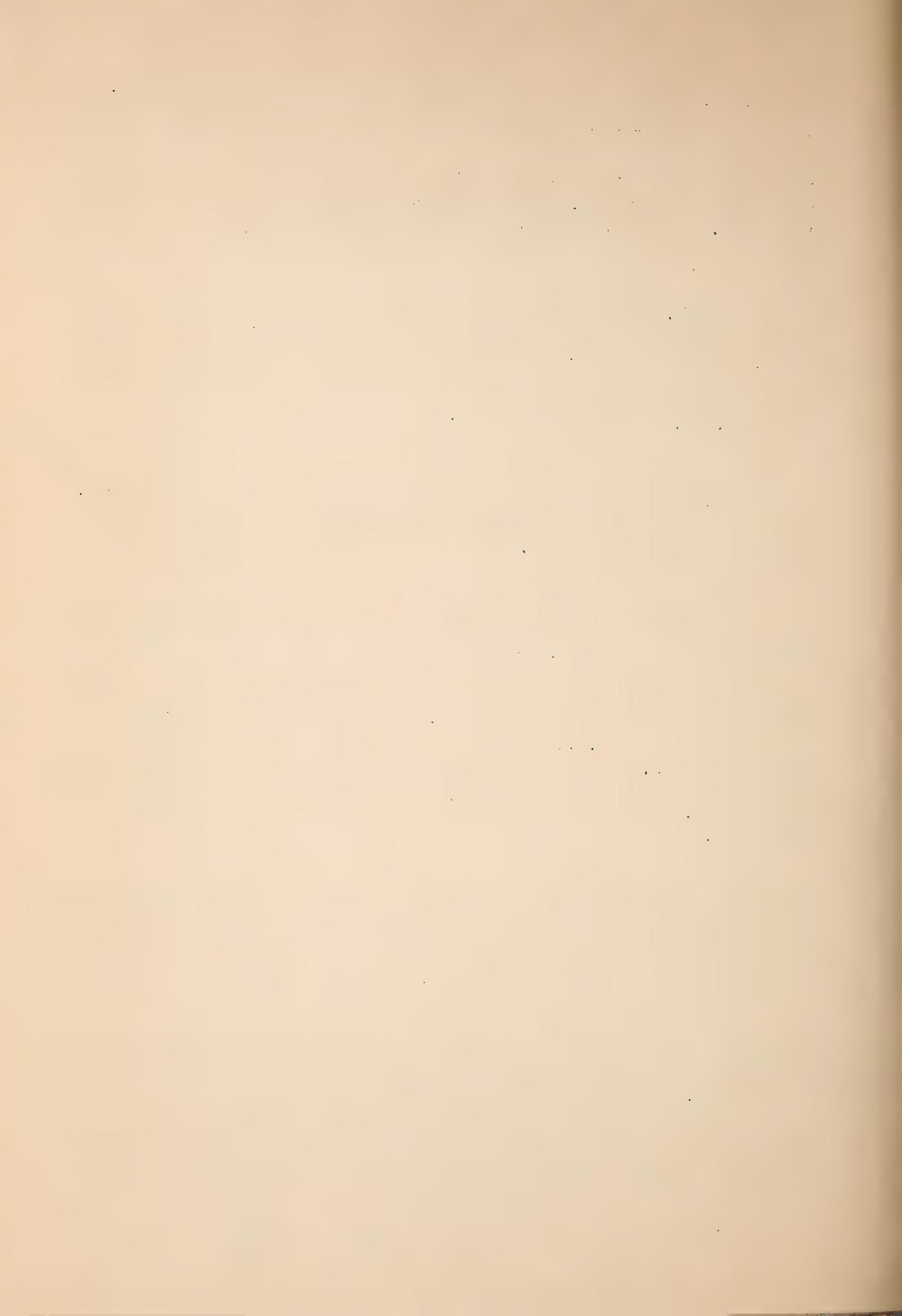
The insurance is purely personal. No particular car is covered. The protection runs with operation of Government-owned cars or cars assigned to Government use. It does not extend to privately-owned cars operated on a mileage basis.

The group policy terminates November 1, 1931, in all cases, and there is no reduction in premium to those who buy insurance after November 1, 1930.

It is important to note that hereafter checks in payment of premium should be sent directly to Ralph W. Lee and Company, 1508 L. Street, N.W., Washington, D.C., and not, as hitherto, to the Chief Clerk of the Department. With check should be letter of advice giving remitter's permanent address, with name either typed or so printed as to be completely legible. The master policy will be retained in the Department as hitherto. Receipts for remittances will be forwarded to employees by Lee and Company.

Ralph W. Lee and Company state that they are prepared also to insure Government cars to cover official operation by any employee. Rates may be obtained upon application direct to the company. With inquiries there should be furnished location of car, make, model number and year, and statement whether touring or sedan."

FIELD PROPERTY INVENTORY. Lists of property charged to field men will be mailed within the next six weeks. In order that the lists may contain property or supplies charged to you, it is requested that we be notified at once when articles purchased on requisitions for delivery to field stations are received. Form 1034 vouchers covering items purchased in the field should also be submitted promptly in order that inventorial items may be recorded. Your careful attention to the above request will assure an accurate list of your property being sent to you.



EDITORIALLY SPEAKING. John A. Ferrall.

STRAWBERRIES-- In one of the Washington, D. C. cafeterias is a sign reading: "Do not shoot your wife because she can't cook. Eat here and keep her for a pet." If the lady in question is ornamental, the advice is perhaps very good, for it appears that a pretty girl can get away with almost anything, regardless of her intrinsic worth.

The passing over my desk of a revision of Farmers' Bulletin 901, "Everbearing Strawberries," by George M. Darrow (in collaboration with George F. Waldo), arouses the thought that strawberries rather occupy the place of pretty girls in the world of horticulture. They are ornamental rather than useful, in a strict sense. There is really no essential need for the strawberry and necessity would never influence a demand for its increased production. The strawberry is a delicacy and the consumer must be tempted by appearance and taste.

Just as the show people glorify the girl, George Darrow and his kind have presented the strawberry to us in such an attractive form, that this perfectly non-essential fruit has become one of the most widely grown in the United States, the annual production being around 500,000,000 quarts and the average market-strawberry crop having a value of \$50,000,000 or so. In gross returns to the grower, it is exceeded only by the apple, orange, grape and peach; and as compared with the cash value of truck crops, is exceeded only by the early-crop potatoes and tomatoes.

The course of training for the "stars" is equally strenuous in both fields, the present-day strawberry apparently being a refinement of the wild meadow strawberry. Back in 1923, George M. Darrow crossed the Missionary and Howard 17 strawberries at the U. S. Plant Field Station, Glenn Dale, Maryland, and secured one of the outstanding "stars" of the strawberry field--called the Blakemore, in honor of Marcus Blakemore, the first president of the National Preservers' Association, in recognition of his public service in connection with the preserved-food industry.

This new star is extremely versatile, being able to sing as well as dance, so to speak, and is already winning recognition as an extremely promising dual-purpose variety. Not only has it shown both superior market and preserving qualities, but its characteristics make it well adapted to the present matted-row system of growing strawberries, the method commonly used along the Atlantic Coast. Just what this combination of exceptional market and preserving qualities means to the grower in providing an outlet for his crop may be sensed from the fact that in 1928 some 110,000 barrels of strawberries (the equivalent of nearly 5,000 cars of fresh berries) were frozen, chiefly for the preserving and ice cream industries!

IN A LIGHTER VEIN.

THE EXPLANATION.--Two Washington, D. C. youngsters were spending a part of their school vacation at the uncle's farm in Virginia. As they wandered about the place, they stopped to look at the cows in a field nearby.

"Marie," said one of the children, "I don't see how cows can eat grass, do you?"

"I suppose it is like this," explained Marie, thoughtfully, "When cows are very young their mother keeps saying to them: 'If you don't eat grass, you can't have any pie.'"

AND, SPEAKING OF COWS--there was the little girl who asked her mother: "Mama, where do cows get milk?"

"Where do you get tears?" inquired the mother, in her turn.

There was silence for a time, and then the little girl inquired, "Mama, do the cows have to be spanked?"

INDISPENSABLE PEOPLE.--Ability to deliver the goods is always at a premium, but here is a story that illustrates the fact in a very striking manner. A kindly old gentleman overtook a small boy who was loitering along the street, a package under his arm, stopping to look in the store windows, and in other ways seeming to be in no particular hurry.

"You will be late for dinner, sonny," said he, jokingly.

"Oh, no, I won't." replied the boy promptly. "I've got the meat!"

PEAR VARIETIES.--There was evidently a slight misunderstanding on the part of the lady who, meeting a woman with whom she had struck up a hotel acquaintance, inquired in some dismay, "Is it really true that you are leaving?"

"Yes," replied the other lady. "My doctor finds that the damp airs here do not agree with me."

The other seemed to be a trifle shocked, but finally asked: "But--but there is really no need for you to eat pears at all, is there?"

EVENING IN THE COUNTRY.--An Englishman, walking along a country road with an American friend one night, was startled by the wh-o-o-o, wh-o-o-o of an owl. "What in the world was that?" he asked.

"That's an owl," replied his American friend.

"I know it's an 'owl," said the Englishman. "But what is it that's 'owling?"

PERSONAL MENTION

Dr. Auchter returned to the office Monday, October 27th.

F. L. Mulford is the author of a handbook for flower-lovers who wish to organize and manage horticultural shows. This is a revised edition of Miscellaneous Publication 85-MP, under the title "Horticultural Exhibitions," and gives the result of the author's years of experience as a flower grower and exhibitor, telling how to organize a show, how to classify competitors, and how to arrange the classifications, with hints as to dates, entrance fees, prizes and the like.

Lee M. Hutchins has been authorized to visit Paris, Montepelier, and other points in France before returning to the United States, to make a study of virus diseases related to the phony peach disease.

C. A. Reed spent a short time at Stamford, Connecticut, late in October, making a study of the species and varieties of nut trees in the planting of Dr. Robert T. Morris.

The canning quality of certain commercially important eastern peaches is discussed in Technical Bulletin No. 196, just issued. It was prepared by Charles W. Culpepper, physiologist, and Joseph S. Caldwell, senior physiologist. The experimental work described has been concerned with determining the suitability for canning of the more important commercial eastern varieties of peaches, and the conditions necessary to produce a high quality product.

G. H. Rieman left Washington October 25 for a short visit to Bel Air, Maryland, to obtain data on bean experiments, and to transfer Government property and equipment from the field to the laboratories at Washington, D. C.

George M. Darrow (in collaboration with George F. Waldo) has revised Farmers' Bulletin No. 901, "Everbearing Strawberries." The bulletin calls attention to the fact that strawberries may now be had throughout the summer and fall months in the northern United States. Plants of the everbearing sorts may be set in the spring and a crop obtained in the summer and fall of the same year.

R. C. Thompson made a short trip to Florence, South Carolina, and then to Holland, Virginia, to collect harvest data on sweet potatoes.

Dean H. Rose left Washington October 21 for a ten-day trip to points in Maryland and Virginia, to conduct investigations on the handling and transportation of sweet potatoes.

Freeman Weiss left Washington, D.C. October 20, for a short trip to points in North Carolina and Virginia, to plant experimental plots in connection with his investigations on narcissus and iris diseases.

Roy N. Covert, Meteorologist, Weather Bureau, has prepared a revised edition of Farmer's Bulletin No. 1512, "Protection of Buildings and Farm Property from Lightning." The Weather Bureau recommends the protection of all important farm buildings where thunderstorms are frequent and intense--and a number of insurance companies make lower rates for protected buildings. Some companies, in fact, will not insure unprotected buildings. The bulletin gives concise, practical and up-to-date information on the subject, specifications for installing the equipment, etc., etc.

Eugene May, Jr., who has spent the summer at the propagating greenhouse on the U. S. San Diego Acclimatization Garden, Torrey Pines, California, has returned to Washington and resumed his special propagating work at the Department's greenhouse, with supervision of special work at the Bethesda and Beltsville, Maryland, greenhouses.

A. J. Riker will spend approximately two months visiting points in Wisconsin, Minnesota, Iowa, Nebraska, Kansas, Missouri, Arkansas and Oklahoma, inspecting various experiments on the control of root knot of piece-root-grafted apple trees, in cooperation with representative nurserymen of the Middle Western States.

The citrus rust mite is usually ranked third among the injurious pests on citrus trees in Florida damaging more or less about 50 per cent of the fruit. "The Citrus Rust Mite and Its Control," by W. W. Yothers and Arthur C. Mason, issued as Technical Bulletin No. 176, describes control measures. Insecticides that would control leaf-eating insects are of no value against these mites.

Secretaries to project leaders should make it a rule to notify us of the permanent addresses of new appointees in order that they may be placed on the mailing list to receive the NEWS LETTER regularly. Notification of changes of address should also be sent immediately.

GULLIAN PICKERING RIXFORD, 1838-1930

As the NEWS LETTER is being mimeographed and prepared for mailing, telegraphic word comes of the death of G. P. Rixford of San Francisco, who retired from the service last summer at the age of 91, and who had recently celebrated his 92d birthday. Mr. Rixford was struck by a train the morning of October 27, and died that afternoon.

In his passing, horticulture, and in particular California horticulture, has lost a most valuable friend; and his death brings a keen sense of personal loss to those of us who have known him personally, for he was one of the most beloved members of our personnel.

"Potatoes are now our most important vegetable crop," said W. R. Beattie, discussing this angle of the Thanksgiving dinner over the radio, "and our annual consumption of potatoes about 400,000,000 bushels. The largest potato producing states are New York, Minnesota, Michigan, Maine, Wisconsin, and Pennsylvania, though potatoes are grown more or less in practically all parts of the country, and several of our southern States now supply our early markets with early-season potatoes. Mashed, baked, or boiled potatoes are today one of the standard dishes for the Thanksgiving menu."

Sweet potatoes are believed to be of American origin. Records of the voyages of Columbus contain references to them, and specimens were carried back as proof of the wonders of the New World. They were cultivated in Virginia shortly after its first settlement. The sweet potato is second in importance among our vegetables and first in importance in our Southern States. Baked or candied yams, as they are often called, not only find an important place on the Thanksgiving table of our southern people, but are an important article of every day diet throughout a large portion of the country.

Tomatoes are also of American origin--probably coming from Mexico--but were first used in Europe. They are mentioned as growing in Virginia by Jefferson in 1781. At first they were known as "love apples," and were grown for ornament. Introduced in Salem, Mass., in 1802, by an Italian painter, he found it difficult to persuade people to even taste the fruit. In Connecticut, the first tomatoes were grown about 1832, where they were simply a curiosity, and it was not until about 1844 that tomatoes began to be popular in New England. It is significant that the tomato, though of American origin, was not cultivated by the North American Indians; and there is abundant evidence that the tomato was considered poisonous by the majority of our people up to 1835.

Beans were grown by the Indians--several varieties, especially of the Kidney bean type and the so-called Cranberry type. Miles Standish in his first explorations found sacks of beans and baskets of corn buried together where the Indians had hidden them. Beans immediately began to form a part of the food supply of the early colonists--and they are still holding their own, especially in New England!

Historians appear uncertain as to whether pumpkins and squashes are of Old World or New World origin, but certain of the gourds are frequently mentioned by early writers, mainly in connection with their use as vessels containing water. There are indications, however, that the large squashes were introduced from Europe, and that the common pumpkin is of American origin, as several kinds of pumpkins grow wild in Mexico and in the southwestern part of the United States. They are still a trifle wild, as one may find by indulging too freely in pumpkin pie at the Thanksgiving dinner!

I regret to report that evidences seem to point to the fact that few of the fruits that adorn the Thanksgiving feast are of American origin, but we have shown excellent judgment in seizing upon the best wherever found. We may claim credit, I believe, for grapes, cranberries, and certain kinds of plums. Cranberries are native of the Cape Cod region in Massachusetts, of New Jersey, and of many sections of the Great Lakes region, and are grown in the Pacific Northwest. And any turkey placed upon the Thanksgiving table would be deeply humiliated if not accompanied by a chaperon in the shape of cranberry sauce. Our native grapes are for the most part marketed before Thanksgiving, but in their place we have the California-grown European grapes which are now full-fledged American citizens, of more than voting age.

Among the Old World vegetables that contribute to the Thanksgiving dinner are celery, lettuce, cabbage, beets, carrots, parsnips, parsley, and onions--as the most important. The use of celery is restricted to comparatively recent years, but its popularity has grown rapidly and its use is naturally associated with the Thanksgiving turkey. Lettuce, another of our leafy vegetables, was used very largely by the ancient Romans in connection with their feasts, and we find ourselves concurring in their taste and following their example. Beets and cucumbers often appear on the Thanksgiving table in the form of pickles, or as a part of the salad course--plus at least a trifle of the onion as a necessary part of the dressing that goes with the turkey. Carrots, parsnips and salsify are frequently used as cooked vegetables for the dinner--and cabbage is made into slaw for thanksgiving. Cauliflower and Brussels sprouts are not unwelcome. With the development of the great winter vegetable industry of the South, our markets are well supplied with fresh vegetables at Thanksgiving time. Apples are used in the salad courses, or are frequently made into sauce and served with the turkey. The absence of pumpkin pie for any reason may find a very satisfactory substitute in the form of apple pie. And there is the basket of beautiful red apples, golden oranges, grapes, bananas and other seasonable fruits, already mentioned. Help yourself!

Yes, the turkey may still be the central figure of the Thanksgiving dinner, but the affair comes closer in our day to a horticultural banquet. And while the American people are indebted to the Indians for what they contributed to our list of fruits and vegetables, they owe an even greater debt to the horticulturists who have not only greatly improved the original crops and varieties, and preserved many of the originals which might otherwise have been completely lost to posterity, but have brought in and acclimatized the best things from all over the world. Watermelons, for example, were brought to America by Columbus. The tomato was educated abroad--going first to Europe, then Spain and Italy, later to Germany and finally to England, coming to us as an ornamental and then developing into the marvelous food plant that it is now. Potatoes of South American origin came with the colonists by way of Europe and very soon became an important article of diet. And the horticulturist workers have capped all this by working out methods of handling and transportation to bring the fruits and vegetables to the consumer in the best possible condition.

UNSKILLED LABORERS
EMPLOYED UNDER
LETTERS OF AUTHORIZATION.

Employment of any unskilled laborer under authority of letter of authorization is restricted to not to exceed 90 days during any one fiscal year, such period to include all service whether for the employee or group of employees hiring him, and whether under one or more letters of authorization. Whenever there is any possibility that the service of a temporary employee will exceed the 90-day period, his appointment should be requested, using Form H.C. & D. No. 16 for this purpose--or, if this form is not at hand, giving us the following information:

Name in full:

Date and place of birth:

Legal residence:

Past experience:

Salary recommended:

(If service is to be intermittent, give a per diem or hourly rate)

Date appointment is to become effective:

Length of time to be employed:

Reasons for employment:

If you are employing a laborer without an appointment, be sure that his employment is limited to 90 days. If some other employee of the Bureau is employing him also, consult him and make sure that your joint employment will not exceed 90 days--that is, if the other man has employed him 50 days, you may employ him for but 40. If your joint needs require him for more than 90 days, then request his appointment without fail (on a per diem or per hour rate, when actually employed), giving us at least 10 days notice in advance of the date it is to become effective. Do not employ him beyond the 90-day period unless and until you have been notified that his appointment has been approved and is effective.

Under no circumstances can payment be made for unauthorized employment of unskilled labor beyond the 90-day limit.

VOUCHERS NEEDED
IN DUPLICATE, ETC.

Some of our employees are overlooking the fact that we need extra copies of vouchers--not merely one copy. TWO copies of all vouchers are required, and that means the travel voucher, and the vouchers covering purchase of supplies, etc. We need TWO copies of itinerary reports. And THREE copies of the statement reporting the use of personally-owned automobiles.

When the extra copies have to be made in the office of the project leaders here, it naturally means a delay in settling accounts and sending out checks.

REQUESTING PUBLICATIONS. It seems that the Office of Information of the Department has had more or less trouble with the manner in which requests for the mailing of bulletins have reached it--especially the lack of any uniform method of sending in such requests. In order to remedy this, Bureau of Plant Industry Memorandum No. 538, has been issued under date of October 28, 1930. It reads as follows:

MEMORANDUM FOR HEADS OF OFFICES.

Gentlemen:

Within the past few months the Office of Information has registered a number of complaints with the Bureau Office of Publications as to the manner in which requests for the mailing of publications to domestic addresses have been submitted by the various offices of our Bureau. In order to inaugurate a uniform system that will meet with the requirements of the Office of Information it is requested that in submitting requests for publications in the future the procedure set forth below be followed:

If a request is for not more than 5 publications, an envelope should be addressed, and the publications desired should be noted on the inside of the flap.

For requests for more than 5 publications a frank should be addressed, on the back of which should be noted the publications and the number of each desired. If the publications requested are liable to weigh more than 4 pounds in bulk, extra franks should be made out.

Each request should be accompanied by an order made out on form P.I. 133, signed by a responsible person in your office. The Bureau Office of Publications will be glad to see that you are supplied with the necessary order blanks.

These requests may be sent directly to the Office of Information unless they are for more than 25 copies of any one publication, when they must be routed through the Bureau Office of Publications in order that a certificate as to their use may be attached.

If your office has no central place for the handling of these requests, will you kindly see that a copy of this memorandum is placed in the hands of everyone who has occasion to make such requests."

THAT REMINDS ME--

THAT it is necessary for us to make up the payrolls here in the office on the 19th of each month, if checks are to reach employees promptly after the end of the month. This means that changes of address for salary checks should be sent to the Washington Office to reach us on or before the 19th--and that it is equally important that all changes between the 19th and the end of the month be telegraphed to us so that no duplicate or overpayments will be made.

THAT before renting space for a garage you should be sure that your letter of authorization is amended to cover it. Also that if the rental exceeds \$50.00 in any one fiscal year, bids are to be secured by the Washington office. If the cost is to be less than \$50 for the year, the Short Term Rental Agreement should be used. Forms for these short term agreements may be secured from Mr. Swartz.

THAT for LEASES for office space, laboratories, etc. where the rental will exceed \$500.00 during any one fiscal year, a statement must be secured from your local Federal Real Estate Board to the effect that there is no space available in any Government-owned or rented buildings. If it is an entirely new lease, information will also be needed as to the number of square feet of space to be used for office furniture and equipment and the number of regular and intermittent employees who will use the space.

THAT in the matter of gasoline tax, the Secretary of State of Oregon in a letter to the Department under date of October 15, 1930, requests that all outstanding stocks of State of Oregon forms for claiming exemption of Oregon Gas tax on motor fuels sold for the use of the Federal Government be returned to the Office of the Secretary of State, Salem, Oregon. This is for the purpose of leaving the field clear for the use of Standard U. S. Government motor fuels tax exemption certificate Form No. 44, prescribed by the Bureau of the Budget. All of our workers in the State of Oregon are requested to arrange for compliance with this request.

THAT in the matter of affidavits, the General Accounting Office has notified the Department that affidavits to expense accounts by clerks designated by the Collector of Customs to administer oaths will not be accepted for our workers. It is held that the authority applies only to employees of the Customs Service and does not permit the administering of oaths to expense accounts of employees in other branches of the Government service. Any of our workers who may have been in the habit of having their accounts executed by clerks designated by the Collectors of Customs will please note this decision and act accordingly.

 EDITORIALY SPEAKING. John A. Ferrall

RIXFORD--

PLANTSIAN

EXTRAORDINARY!

I remember my astonishment back in 1908, when Dr. Walter T. Swingle gave me the information necessary for requesting the appointment of G. P. Rixford. The data revealed, first, that Mr. Rixford was not a botanist or horticulturist, but a civil engineer; and, second, that he was 70, an age at which we are accustomed to recommending retirement, not appointment! Such was the beginning of my acquaintance with the remarkable man whose career was terminated October 27, 1930, when, at the age of 92, and scarcely a month after his retirement from active service in the Bureau, he accidentally stepped in front of a moving train while attempting to board another at the Southern Pacific station at Palo Alto, California, and died at the Palo Alto hospital several hours later as a result of his injuries and without regaining consciousness. He was on his way to San Francisco after spending a week-end at his little experimental farm at Los Altos, California, which has been receiving most of his attention since his retirement. When his suitcase was opened after his death, it was found to contain the usual collection of horticultural specimens--fruits, twigs, leaves--which he was taking home for study.

Even before he made one of his rare visits to Washington, D.C., I had heard much of his extraordinary physical and mental vigor; during his first trip he gave me a demonstration of both as I accompanied him on a tour of the bureaus and greenhouses! He had all the energy of a man of 45; though he was then about 80, and his ruddy complexion and youthful eyes contrasted oddly with his snow white hair. I had learned before that meeting, of course, that he had graduated as a civil engineer from McGill University of Canada and worked at that profession for a few years--laying out a street railway in Quebec, a railroad from St. Johns to Swanton, and some bridges that are said to be still in use. In 1867, when he was 30, he made one of the abrupt changes that marked his life--he moved to California and gave up civil engineering for newspaper work. The newspaper activities immediately began to pave the way for his career as a horticulturist, his work as a reporter at the San Francisco markets, watching food products of all sorts come in from various parts of the world, increased his interest in plants, and for the next twenty^{years} horticulture became his avocation. When he became business manager of the San Francisco BULLETIN, he offered cuttings and seeds of new and rare plants, instead of the usual trinkets, as premiums for subscriptions, and in this manner introduced the Smyrna fig and many other valuable crop plants into California, work which led to the award to him, in 1929, of the Moyer medal for distinguished service in the field of foreign plant introduction.

In 1889, he gave up newspaper work to devote his full time to his horticultural experiments, work which he continued until persuaded to join the staff of the Bureau of Plant Industry in 1908--to give us 20 years of unbelievably efficient service. G. P. Rixford needs no monument--in the orchards and gardens of the Pacific Coast are his living memorials; and in the hearts of those who knew him, a lasting memorial in the impress of his lovable personality.

IN A LIGHTER VEIN.

SUCH A DIFFERENCE!--The instructor found that his students were paying but little attention to his talk and in order to shock them into life he asked abruptly: "If you took a magnifying glass and looked into the lungs of a dog, what would you see?" The dumbfounded pupils remained in startled silence. "You would see," said the instructor, impressively, after a pause, "the seat of his pants."

There was much laughter over the incident and the lecture was resumed with a much more attentive class. One of the members, however, attempted to relate the story to the men in the office the following morning. Asking the question that the instructor had asked, he waited a moment, knowing that no reply would be received, and then prepared himself for the outburst of laughter to follow his explanation. "You would see," he said slowly, "the seat of his trousers."

He still doesn't understand why the story sounded differently as he told it.

NATURE NOTE.--Eve was much disturbed over Adam's appearance. "My heavens, Adam," she exclaimed. "What in the world caused that awful rash on your back and shoulders."

"It's the new shirt you made for me, my dear," he explained, painfully. "I do wish you'd learn the difference between poison ivy and oak leaves."

NOT CHILDREN AT ALL.--Tom, the country six-year-old, says HILBER'S, presented himself one day in even more than his usual state of dust and disorder and was asked by his mother if he would not like to be little city boy and always be nice and clean in white suits and shoes and stockings.

"They're not children; they're pets," answered Tom, scornfully.

THE SAME THING.--The farmer was surprised to encounter the aged village man-of-all-work wandering along the road one cold and rainy night. "Bad night, Sam," he said. "I'm surprised to see you out. I should think being out in weather like this would be terribly bad for your rheumatism."

"Well, sah," replied Sam, "I'm just follerin' the doctor's orders."

"What!" exclaimed the farmer. "You mean to tell me any doctor was crazy enough to tell you to walk around in weather like this?"

"Not zactly, sah," admitted Sam. "But he don' tole me I needed chicken."

GOLF.--LONDON OPINION reports that a man complained to his neighbor, as they rode to work one morning, that his wife had declared that if he did not give up golf she would leave him.

"Bad luck, old chap," sympathized the neighbor.

"Yes," agreed the first man; "I'll miss her."

PERSONAL MENTION

H. F. Bain spend a week early in November visiting points in New Jersey in connection with his studies of false blossom of cranberries, to inspect plantings of new varieties, and to confer with R. B. Wilcox regarding work on cranberry diseases.

Charles E. Swingle attended the meeting of the Royal Canadian Institute at Toronto, Ontario, November 15, delivering an illustrated lecture on "Plant Hunting in Madagascar." In connection with this trip, Dr. Swingle is visiting Vineland, Ontario and Ithaca and Geneva, New York, to conduct nursery stock investigations.

"Daffodils," by David Griffiths, issued as U. S. Department of Agriculture Circular No. 122, is a revision of and supersedes the old Department Bulletin No. 1270, "The Production of Narcissus Bulbs." The name "daffodil," originally had reference to the trumpet, short, and medium-trumpet forms of Narcissus, but has now come to be coextensive with Narcissus. The circular has 73 pages and 50 illustrations.

George M. Darrow attended the meeting of the Oregon Horticultural Society at Eugene, Oregon, November 12-13, reading two papers; the first on the progress of the small fruit industry, and the second dealing with improving strawberry planting stocks.

The Journal of Agricultural Research for October 1, contains studies on Infectious Hairy Root of Nursery Apple Trees, by A. J. Riker, W. M. Benfield, W. H. Wright, G. W. Keitt and H. E. Sagen, and "Studies on the Progeny of Single-Cell Isolations from the Hairy-Root and Crown-Gall Organisms," by W. H. Wright, A. A. Hendrickson and A. J. Riker.

Walter T. Swingle, principal physiologist in charge of crop physiology and breeding investigations, is in Washington for some two months, conferring with administrative officers concerning his investigations and supervising work in connection with the devising and installation of special propagating equipment in the greenhouses conducted by his unit in Washington, D. C., and at Bethesda and Beltsville, Maryland.

R. F. Suit is spending approximately a month visiting points in Iowa, Kansas and Nebraska, to conduct investigations on crown gall in nurseries.

"Roadside Markets," is the title of U. S. Department of Agriculture Leaflet No. 68, prepared by Caroline B. Sherman, who writes that interest in roadside markets is now widespread and that apparently the stage of mushroom growth in the business is nearly passed, so that the time has come when growers must make a careful study of the question before putting much time, money or energy into a roadside market. The leaflet discusses locations, prices and general factors contributing to success.

Lee M. Hutchins attended the meeting of the Société Pathologie Comparée at Paris, France, November 11, delivering an address on American plant disease.

C. A. Reed, in an interesting discussion in American Forests for October, predicts that there will be five million walnut trees, scions of the aristocracy of the American tree family, growing throughout the nation by 1935. "This forest of trees," he writes, "planted by the Boy Scouts of America in cooperation with the United States Department of Agriculture and the American Forestry Association, will rise from walnuts selected from the famous native trees at Mount Vernon, Arlington Cemetery, Valley Forge, Gettysburg and other historically sacred spots."

Carl Purdy of Ukiah, California, gave a lecture on "California Wild Flowers for Eastern Gardens," before the American Horticultural Society and its guests in the auditorium of the Interior Department, Washington, D.C., on the evening of November 8. Employees of the office and their friends were invited. Mr. Purdy is a well known authority on our native plants.

Lauriston C. Marshall was in Washington November 7 and 8, conferring with Dr. Walter T. Swingle and officials of the Smithsonian Institution concerning cooperative work in the devising and operating of special propagating chambers, etc.

Under the title "Fruits and Vegetables," the Federal Farm Board is distributing its Bulletin No. 1 by Harry C. Hensley, senior economist, dealing with the organization of local associations for the cooperative marketing of fruits and vegetables. The bulletin, which may be secured free from the Federal Farm Board, Washington, D.C., contains forms of articles of incorporation, by laws, etc. and gives full consideration to new cooperative marketing ideas.

"The song writer who pictured the rose in a care-free life under cloudless skies and its freedom from worry while it kisses the passing breeze, evidently was unfamiliar with the existence of plant diseases," wrote one of our neighbors in the Press Service some months ago, on discovering that our pathologists had listed some thirty-nine worries of the rose in their catalogue of diseases affecting economic and ornamental plants in this country. Readers of Mr. Mulford's bulletin may learn of these troubles of the rose, and the cure--and of the best methods of planting, pruning, fertilizing, winter protecting, etc.

In his talk of November 10, Mr. Mulford suggested that rose planting be done as soon as possible. "Be sure to make the holes sufficiently large to accommodate the roots," he said. "If you need to dig into the sub-soil to get sufficient depth of soil, be sure to provide an outlet for any water that might collect in the place where the subsoil is removed. Digging a hole into the subsoil and replacing with good top soil is of little value if this excavation will collect water and prevent it from draining away. Where subsoils are porous there is no difficulty of this kind, but where the subsoil is a stiff clay there is likely to be trouble. Fifteen inches of good soil is probably near the ideal, but nine is better than fifteen if the lower six inches is water-logged due to poor drainage. Use good top soil well enriched.

"Plant the rose a trifle deeper than it grew in the nursery; if it is a grafted or budded rose, cover the point of union of scion and stock 2 or 3 inches. As most roses will grow from cuttings there is no danger of rotting them by planting deeper than they were growing before. When planting is at this time of year, it is well to prune them back severely and draw the earth up about them almost to the top if they are 10 inches high and to a depth of 10 or 12 inches if they are taller. All roses should be cut back severely at the time of transplanting.

"If experience has shown you that your varieties need protection during the winter, or you do not know how much cold your varieties will stand, it will be well to draw soil up about the plants to a depth of 10 inches or more....For the best flowers even more wood should be removed in the spring, so that there is no need of fear of overdoing the cutting now. If the plants are not cut back so severely now, they should be staked securely, or high mounds should be provided about them....If roses have not been pruned for more than a year, it is well to do it now, as it is much easier when the leaves are off so that all the branches may be seen. Begin at the outer end of the branches, take off old wood, gradually working toward the root. After the pruning attention should be given to mulching. A mulch of manure or leaves between the mounds is desirable for tender roses. It is a good plan to put the mulch on as soon after the ground freezes as practicable. If there is any evidence of scale insects on the plants, it would be well to give them a spraying with lime-sulphur solution on a day when the thermometer is well above freezing soon after freezing weather has checked all growth so that the plants are truly dormant...."

HANDLING FOREIGN PLANT AND SEED SHIPMENTS.

"In order to relieve the project leaders of the details in connection with foreign plant and seed shipments, and to insure the handling of them in accordance with instructions outlined in B.P.I. Memorandum No. 350, dated May 2, 1928," says Dr. Aucter in a memorandum of November 13, 1930, to project leaders," the procedure outlined below will be followed:

"Complete shipping instructions for all plant material or seeds destined for domestic or foreign shipment should be sent to Mr. E. C. Scott, Room 235, West Wing.

"As the handling of foreign shipments requires considerable time in the preparation of papers, proper marking, etc., it is essential that sufficient time be allowed if they are to be shipped on a definite date, especially when it is desired to have them transported by a certain boat. As it is always necessary for the Office of Foreign Plant Introduction to communicate with the United States Dispatch Agent at New York for shipping instructions, such materials must, of necessity, be held here pending the receipt of such instructions from New York. If information regarding the dates of sailing is desired, Mr. Scott will secure this information for you.

"It is very important when furnishing shipping instructions to Mr. Scott, that full information be given, such as whether it is to be sent by mail, freight, or express; its value; name of the boat (if shipment is to be made by particular boat); and the complete address of the person for whom it is intended. You are also requested to indicate where the material was grown. If you have any suggestions as to the packing, they should be submitted along with the shipping instructions.

"Where the material intended for either domestic or foreign shipment consists of small packages of seeds or plants, it should be sent direct to Mr. Scott with complete shipping instructions and information requested above. Where the shipment consists of boxes, or other heavy packages, they should be held by you pending forwarding arrangements to the Inspection House by Mr. Scott.

"In order that you may be satisfied that all plant material and seeds received in this country from abroad have been passed through the inspection house, it has been arranged for Mr. Scott to stamp upon all such shipments "NOTED, E. C. SCOTT". Should you receive a package direct and it does not contain such a stamp thereon, you should immediately return it to Mr. Scott UNOPENED, or notify him of its receipt and he will see that it is given the proper inspection and have it returned to you with the notation outlined above. The proper inspection of all plant material or seeds from foreign countries is one of the most important phases of this work and should be carefully adhered to in order that no possibility may exist of introducing into this country any new pests or plant diseases.

"Frequently the receipt of plant material is needlessly delayed due to the fact that the package or box is poorly addressed and without sufficient identification. In order to insure against this, it is requested that carbon copies of all letters pertaining to the receipt or shipment of domestic or foreign plant material or seeds be forwarded to Mr. Scott in duplicate in order that he may send a copy to the Office of Foreign Plant Introduction, which will enable them to anticipate its arrival and eliminate delays as far as possible.

"All purchases of plants or seed either bought in this country or abroad should, as far as possible, be handled on requisition as it enables us to expedite the shipment and pass the accounts promptly for payment.

"As stated above, the reason for this procedure is to enable the project leaders to divorce themselves from the many incidental details in connection with the handling of domestic and foreign plant shipments by having Mr. Scott of this office handle all such matters for the office through Mr. W. R. Poore of the Office of Foreign Plant Introduction, thus conforming to the Bureau policy as outlined in B.P.I. Memorandum No. 350."

In connection with the foregoing, it is interesting to note that on May 2, 1928, in connection with the issuance of Bureau of Plant Industry Memorandum No. 350, Dr. Taylor wrote to Mr. Ryerson:

"In order to safeguard the work of the Department, and especially that affecting our crop investigations offices, I would ask that hereafter when any seeds, plants or plant material arrive from foreign countries, for which previous handling and distribution has not been arranged for with your office, such seeds, plants or plant material be taken charge of by the Office of Foreign Plant Introduction, and held pending its final disposition. This is in accordance with our Memorandum of December 27, 1924, which has just been revised and reissued as Memorandum No. 350, of this date, which provides that the seeds, plants or plant material introduced from foreign countries shall be handled and cleared through the Office of Foreign Plant Introduction.

"A copy of this letter will be sent to the various offices of the bureau, and also to Mr. Peter Bisset, Horticulturist in Charge, Inspection House."

For the information of our workers, Bureau of Plant Industry Memorandum No. 350 is reprinted on page 225.

B.P.I. Memo. 350

May 2, 1928

MEMORANDUM FOR HEADS OF OFFICES.

Gentlemen:

Please note the following procedure which should be adhered to in all matters pertaining to the introduction from abroad of living plants, plant parts, bulbs, seeds, etc., for scientific use.

1. The Office of Foreign Plant Introduction will act as agent in ordering, receiving and handling all foreign plant importations for departmental use. The packing and shipping of all plant material from Bureau offices to foreign countries will be handled by the above Office.

2. Requests for foreign plants and plant parts should be made to the Office of Foreign Plant Introduction in the form of purchase requisitions accompanied by necessary explanatory memoranda.

3. Heads of Offices are requested to file with the Office of Foreign Plant Introduction copies of all correspondence relative to the ultimate securing or exchanging of foreign living plants, bulbs, seeds, etc.

4. Bureau offices desiring to avail themselves of the services of the Office of Foreign Plant Introduction, in the case of domestic shipments, should communicate with the representative of the above Office at the Inspection House, who will arrange to have the material inspected by the Plant Quarantine and Control Administration and handle all details of receiving and forwarding.

The object of the foregoing procedure is to centralize responsibility in the matter of the introduction of living plants and living plant parts into this country. It is furthermore intended to safeguard our country against the possible introduction of any dangerous alien pests and to be able to trace any such pests, if by chance they should be introduced.

We bespeak the cordial cooperation of all bureau offices in this effort to safeguard the scientific work of the Department and urge that close relationships be established with the Office of Foreign Plant Introduction by personal contacts and conferences.

WM. A. TAYLOR,
Chief of Bureau.

Reprinted for information of
H.C. & D. personnel.

COPIES OF TRANSPORTATION REQUESTS. It is of the greatest importance that copies of transportation requests be mailed to Mr. R. K. Swartz as rapidly as the requests are exchanged for transportation. Failure to send the copies to us promptly often results in holding up payment of railroad vouchers for large amounts. Requests that are spoiled should be marked "Void" and both copies sent to Mr. Swartz so that you may be released from the charge for them.

EXEMPTION FROM GASOLINE TAX, etc. When exemption for gasoline tax is obtained through the use of Form 44, the carbon should be attached to the voucher covering the purchase. If the gasoline is purchased on a monthly charge account basis the voucher covering the month's supply should be accompanied by the carbons of the certificates. If, however, the gasoline is purchased while on a trip and the exemption is obtained, the carbons should be attached to the expense account which lists the purchase. Incidentally, we may mention that these certificates when sent along with the expense accounts, may be used in lieu of subvouchers.

VOUCHERS On all vouchers the space after the word "Appropriation" should be left blank. The information to fill this space is supplied by the Office of Accounts here.

EXPRESS Attention is called to the fact that all express shipments (as well as freight) must be sent under Government bills-of-lading, as no authority exists for the payment of express charges where bills-of-lading are not used.

TRAVEL EXPENSE VOUCHERS, FALSE STATEMENTS, OR VIOLATION OF OATH OF OFFICE. "Where an employee makes false statements as to certain items in his claim for reimbursement of expenses incurred, leaving doubt as to just what expenses were actually incurred, the entire claim will be disallowed. The presentation by an employee of a falsified travel expense account constitutes a violation of his oath of office and thereby works a forfeiture of all accrued and unpaid travel expenses incurred by him in connection with the duties of the position he held under such oath." Comptroller decision, A-33152, 10 Comp. Gen. 138.

This decision, in connection with an internal revenue agent of the Treasury Department, points out, too, that a restatement of the claim to include only items presumed to be correct is not sufficient to eradicate the taint of fraud. Mr. Swartz can supply the full decision to any one interested.

EDITORIALLY SPEAKING. John A. Ferrall

BULLS, COWS--
AND HORTICULTURE: When Frank L. Goll was in Spain for a year or so representing the Department at the Seville exposition, he naturally met many of the Americans who make their home in that country for at least a part of the time. Among these acquaintances is Sidney Franklin, the young American who invaded Spain and became internationally famous as a Bull fighter. You've seen his name on the front pages of the newspapers often. Well, Sidney recently came home for a visit and on to Washington where Frank helped to show him the sights of the National Capital--including the editorial office of the NEWS LETTER. At the latter place Frank took advantage of the opportunity to make a number of "wisecracks" about eliminating the "bull" from the publication and so on. The editor took it good naturedly, as diplomacy demanded in conversation with a man like Franklin who makes a specialty of disposing of angry bulls. All in all, Frank had a very pleasant visit and not until he sees this will he realize that the editor benefitted also, since he was on the point of eliminating the editorial in this number for want of a subject to discuss.

However, being an Irishman, the discussion of bull fighting naturally turned his mind in the direction of cows, and he recalled an item from the Wisconsin Dairy Herd Improvement Association Report (quoted in the California Cultivator). "I love my scrub cow," it says. "My scrub cow gives me employment every day of the year. She consumes my hay and grain, and grows sleek and fat. She is a thing of beauty, although a burden forever. To produce milk and butterfat would detract from her physical beauty, therefore it is unreasonable to expect it of her. She helps to reduce my income tax.

"I love my scrub cow. She is a luxury. Dairy men are entitled to luxuries as well as other people. My neighbor tells me to sell her to the butcher, but my neighbor is a hard-hearted man; so is the butcher. The cowtender says that the profits from three of my best producers will keep her in comfort, so why should I worry? I love my scrub cow. It requires much time to feed her, but very little time to milk her. My banker says that the small amount of milk she contributes can be justly called 'the milk of human kindness,' for it is human kindness that allows her to exist. Even Parson Jones was heard to remark that a greater love hath no man than he who wears his young life away to support a scrub cow."

For, you see, the horticulturist has this "scrub cow" problem under a different name. He speaks of "drone" trees, "undesirable" trees, "off type" trees, and the like. Shamel's bud selection work has permitted him and his associates to throw the spotlight directly upon this scrub-cow problem in fruit growing. All of which, you understand, points to the conclusion that if Mr. Franklin ever takes up work with the Department, he need not concern himself with the problem of removing the "bull" from this bulletin; he can devote himself to the work of eliminating "scrub cows!"

IN A LIGHTER VEIN.

FIXING THE BLAME.--One of our workers who had chicken instead of turkey for his Thanksgiving dinner this year, was prompted to send in the story of a discussion between Uncle Josh and Aunt Maria. Uncle Josh was comfortably lighting his pipe in the living room when Aunt Maria glanced up from her knitting and remarked: "Josh, do you know that next Sunday will be the twenty-fifth anniversary of our wedding?"

"You don't say so, Maria," responded Uncle Josh, pulling vigorously on his pipe. "What about it?"

"Nothing," answered Aunt Maria, "only I thought maybe we ought to kill them two Rhode Island Red chickens."

"But, Maria," demanded Uncle Josh, "how can you blame them two Rhode Island Reds for what happened twenty-five years ago?"

WHY PAYMENT WAS NECESSARY.--Person Johnson announced, "De Choir will now sing 'I'm Glad Salvation's Free,' while Deacon Ketcham will pass de hat. De Congregation will please 'member that while salvation am free, we has to pay de choir foh singin' about it. So, all please give accordin' to dere means--not accordin' to dere meanness."

EFFECTIVE UTILIZATION OF ONION CROP.--The exasperated husband finally reached into his pocket and drew out his billfold. "Here," he cried, to his tear-stained wife, "for heaven's sake take it and stop crying right out here on the street. Go and buy the hat if you must have it."

"You are a darling," said the wife, gratefully, but taking a firm grasp on the pocketbook. "Now just hold this onion a moment," she added, producing the thing that had caused the abundant tears.

HURRY, HURRY!-- "Can I see the minister of agriculture?"

"Well, he's very busy, madam. What was it you wanted to see him about?"

"Well, I have a geranium that isn't doing very well."

FASHION NOTE.--"Bertha has a beautiful new gown, hasn't she? She said it was from abroad, didn't she?"

"Oh, no," said the friend. "It's her last year's dress that she has turned inside out--so now she says it is from the other side."

SHORT STORY.--He passed the cop, there was no fuss, he passed a load of hay. He tried to pass a swerving bus and then--he passed away!

PERSONAL MENTION

The last week in November was marked by a general conference at Washington of workers cooperating with the office in its variety type book studies. The conference was for the purpose of summarizing the work already done. Among those in attendance from out of town were W. C. Edmundson, R. A. McGinty, C. E. Myers, J. H. MacGillivray, O. H. Perse, J. E. Walker, George E. Star, Paul Work, H. H. Zimmerley and S. H. Yarnoll.

J. R. Cole attended the annual meeting of the State Board workers of A. & M. College, Mississippi, at Agricultural and Mechanical College, Miss., November 24-26, reading a paper on "Important Pecan Diseases of Mississippi and Louisiana."

The Forest Service has prepared a bulletin describing arbor day and its purpose and observance--Farmers' Bulletin No. 1492. Originally observed in Nebraska in 1872, the plan and name "Arbor Day" conceived by J. Sterling Morton, then a member of the State Board of Agriculture and later United States Secretary of Agriculture, has become associated all over the country with patriotic and aesthetic as well as economic ideas. It is at once a means of doing practical good to the community and an incentive to civil betterment--and an important field for horticultural cooperation.

G. B. Ramsey is the author of Department Circular No. 125, just being distributed, discussing the blemishes and discolorations of market onions. It calls attention to the fact that in addition to the diseases that cause decay, there are injuries of less importance which are classified as blemishes. The bulletin tells of blemishes caused by chemicals, by sunlight and by fungi.

Closely following the NEWS LETTER's account of the collection by Dr. Neil E. Stevens at St. Ives, of the first specimen of *Physalospora* ever reported in Great Britain, came the news of his leaving us to join the staff of the Office of Mycology and Disease Survey, taking over the work of the Plant Disease Survey and succeeding Dr. Royal J. Haskell, who is now Extension Plant Pathologist. In his new work Dr. Stevens will broaden the activities of the Survey to include epidemiology studies with certain selected plant diseases, and to initiate research into methods of estimating crop losses due to disease. He has long been interested in these problems as applied to diseases of cranberries and other small fruits, and now will have an opportunity to extend his activities along these lines. The best wishes of his many friends in the Office of Horticultural Crops and Diseases go out to Dr. Stevens in this new work, and we hope to have from him an item now and then of interest to NEWS LETTER readers.

Charles Brooks, J. S. Cooley, and D. F. Fisher, are authors of the revised edition of Farmers' Bulletin No. 1160, "Diseases of Apples in Storage." Storage diseases take a heavy annual toll on the harvested crop of apples, greatly reducing an important food supply and increasing the cost and uncertainty of market operations.

George C. Husman has returned to Washington after a two months' official trip to the Pacific Coast, and reports that fruits of 30 of the Department's new and promising grape introductions, grown in the U. S. Department of Agriculture Experiment Vineyard, Oakville, Calif., were furnished the California State Grange for its convention at Napa, California, October 21-25; and that grapes of Muscat Humbert, Olivette blanche and Maraville de Malaga, all European varieties, and of the Downing grape, a variety of American origin, served at the Land Grant College luncheon November 19, were also from the Department's experimental vineyard at Oakville.

How to avoid or lessen the fire hazards on the farm is described in Farmers' Bulletin No. 1643, taking the place of older publications on this general subject. It is issued under the title "Fire Safeguards for the Farm."

William Stuart is the author of Farmers' Bulletin No. 1639, "Potato Production in the Far Western States," now ready for distribution. This supersedes the old Farmers' Bulletin No. 953, "Potato Culture Under Irrigation."

Of particular interest to employees having charge of field books or office libraries is Leaflet No. 69 of the Department's series, "Preservation of Leather Bookbindings." It was prepared in the Bureau of Chemistry and Soils which, over a period of many years, has devoted much study to the causes of and means for preventing the deterioration of leather bindings and other leather articles.

David Fairchild, principal agricultural explorer of the Department, has been announced as the winner of the George Robert White medal, a horticultural award given annually by the Massachusetts Horticultural Society. The award was made public by the National Geographic Society, through its president, Dr. Gilbert Grosvenor.

Ross C. Thompson, associate horticulturist, has revised the Farmers' Bulletin on asparagus culture, the new publication being issued as Farmers' Bulletin No. 1646, superseding the old No. 829.

of plant studies, but the primary object of all its activities is efficiency of production. The problems of production are investigated to determine economic gains from improvements in quality or type of product, to stabilize annual crops through control of losses caused by disease, and to develop better methods for storage and distribution of products to insure steady consumption.

"Accordingly the Bureau is engaged in crop improvement by breeding and selection; in the introduction of new crops by means of seeds and plants procured from foreign countries; in experimentation in methods of culture and rotation systems adapted to irrigation, dry-land farming, and other systems of agriculture; in investigations in handling, storing, shipping, processing, or otherwise utilizing plants or plant products; and in the study, diagnosis and control of many kinds of plant diseases."

Growers of many crops now produce more efficiently as the result of the bureau's work in breeding and selecting superior varieties. This report mentions recent developments in connection with the Blake-more strawberry, a superior new variety; three superior strains of Washington Navel oranges and a cold-resistant strain of Satsuma orange; peach crosses for use in the fresh state and others especially desirable for canning; Jersey Wakefield cabbage which is resistant to the yellows disease; and strains of lettuce even more disease resistant and commercially desirable than the bureau's earlier lettuce selections which have already largely superseded the older varieties in the commercial lettuce growing areas of the Southwest....

The bureau is studying many plant diseases to determine methods of preventing losses from them. Complete eradication of a disease is preferred when such action is practicable. Campaigns for eradication of some diseases are under way in cooperation with States interested. Outstanding examples are eradication of the disease of citrus trees known as citrus canker, which now nears completion and a somewhat similar campaign against the disease of peach trees known as the phony disease. When complete eradication of the disease is not practicable, methods of spraying, modification of cultural practices, or development of varieties resistant to disease are investigated. Material progress has been made during the past year for the control of fruit and vegetable diseases.

Farmers benefit by practical cultural advice. For example, the bureau determined that under certain conditions it is possible and even advantageous to cut potato seed somewhat in advance of the planting season, when field work is not so pressing.... In California it has discovered a desirable method of fertilizing dates to throw the ripening into a season when the crop is not likely to be injured by rain....

DISSEMINATING AGRICULTURAL INFORMATION. Members of the staff who may feel that it is slow work getting their research data into print and distributed may be encouraged by the report of the Director of Information for the Department. Mr. Eisenhower tells us in his report for the fiscal year ended June 30, 1930, that 25,000,000 popular and technical publications were distributed during the year, and that more than 3,000 news and interpretive articles were furnished to the press of the country. Other calls for information led to the issuance of over 58,000,000 pages of mimeographed, multigraphed, or rota-printed material by the Office of Information, and a large volume of similar material by the bureaus of the Department.

The Bureau of Plant Industry, the report tells us, furnished text for 170 publications and handled 232 reprints and revisions during the year, so it is quite evident that we are doing our share to keep the presses busy. The Bureau furnished 57 papers to the Journal of Agricultural Research, and members of the Bureau's staff contributed 296 articles to outside publications.

SWEET POTATOES FOR EXAMPLE. A special feature of the service rendered by the Office of Information is its series of "press releases," of which more than 1,100 were sent out last year. These interesting items concerning the Department's work are not only used in their original form by newspapers and periodicals, but often form the basis for editorial comment or special articles.

For example, back in September the Press Service sent out an item concerning vitamins in sweet potatoes, revealing that Department Investigators had found sweet potatoes to be an excellent source of vitamins, containing as much vitamin A as the leafy vegetables and more vitamin B than many other root crops. Of special interest was the finding that the sweet potato as a source of vitamin C has an antiscorbutic value equal to about one-third that of orange juice.

The Progressive Farmer for December uses this note as the basis for an editorial which says in part, "A little while ago the doctors of science broke into print loudly commending the virtues of turnip greens and mustard....and now here is something else. What do you think of sweet potatoes? Not so much as you should. As a matter of fact, they are far more valuable than we have realized.

"The chemists of the United States Department of Agriculture say that three of the most important of all vitamins are found in the lowly sweet potato. It has as much vitamin A as the leafy vegetables; it contains more vitamin B than most other root crops; and it affords half as much vitamin C as peach juice or pineapple juice and a third as much as orange juice!"

THE APPLE

Those of us who have grown up with the firm idea that the apple is the king of fruits, and who have somewhat resented the publicity gained of recent years by other fruits, even though they are members of our own family, will be interested in a discussion by Dr. John Harvey Kellogg in the December issue of Fruits and Gardens. (This issue, incidentally, carries the paper on "Relation of Leaf Area to Size and Quality of Apples," by Dr. Magness and his associates.)

"Why we should eat more apples," is the title selected by Dr. Kellogg, and then he proceeds to give us some very good reasons. "Notwithstanding the fact that through Eve's mistake the apple was the beginning of all our mortal woes," he says, thus incurring the anger of his feminine readers right at the start and perhaps prejudicing them against the apple, "it has nevertheless held its place since the beginning of history at the head of the plants which furnish us edible fruits. Certain it is, the apple has, on the whole, no rival among fruits. There are fruits which present a higher proportion of nutriment. But in variety of color and flavor, in satisfying qualities, in ability to hold its place as a fruit staple against all comers, no other fruit equals the apple."

"...The apple has many well-known virtues which have long been appreciated by those who have made a particular study of nutrition. The apple contains little protein but its protein is of a high quality. Its chief constituents are the carbohydrates, sugar and dextrin. The starch which is abundant in the green apple, disappears during the ripening process as the result of the action of ferments which behave much like the ferments of the human digestive juices.

"Scientific observation has proven that of all foods the apple is one of the best for reducing acidity of the urine and introducing the needed alkalies into the systems.

"The free use of apples is an excellent means of combating so-called biliousness, or intestinal toxemia, the very conditions for the relief of which many people, to their detriment, swallow pills, mineral waters, calomel and other drugs, the habitual use of which does enormous harm. The acid of the apple, like that of the lemon, is an antiseptic. A Japanese physician showed that these fruit acids destroy the germs of typhoid fever and also the cholera germs. It has long been known that a diet of apples is an excellent remedy for chronic dysentery...."

"Most headaches are due to intestinal toxemia, the result of inactivity of the colon! Apples at meals and at bedtime serve in many cases as an excellent laxative, and thus make an end of the headaches by removing the cause....Children are particularly benefitted by the free use of apples. Apples are rich in vitamins, particularly C and B, which promote growth and development. The free use of apples aids materially in the development of sound teeth...."

SENDING PUBLICATIONS TO FOREIGN ADDRESSES. The following memorandum by Mr. C. E. Schoenhals is reprinted for the information of new employees and those who may have overlooked the method now in force for handling the distribution of bulletins to foreign correspondents, etc.

The following is quoted for your information and observance from a recent memorandum issued by the Chief of Bureau to the heads of Offices:

"Your attention is called to the attached blanks, Form P.I. 131 (original) and Form P.I. 132 (duplicate), which are to be filled out to accompany any publications sent to foreign addresses. The name of the Bureau and issuing office should appear at the top, and the duplicate be initialed by a responsible officer of your organization, as foreign postage is a charge against your appropriation. The form is signed in the Bureau Office of Publication."

In order to carry the above into effect you are requested to hereafter fill out the accompanying forms in duplicate, initial the carbon copy and forward both copies to Mr. Gillette who will transmit them to the Office of Information where the bulletins will be supplied and mailed.

While these forms are intended primarily to be used as an order on the Office of Information to supply, as well as mail, publications to foreign addresses, should the stock of that Office be exhausted or should there be any special reason for sending the publications in the same mail with accompanying letter, the forms should be attached to the envelope containing the publication--prepared in the same manner as though the Office of Information were to supply the publications, with the exception that "herewith" should appear after the serial numbers. An addressed foreign frank like the attached should be pasted on the envelope and the envelope with the form sent to Mr. Gillette.

Where it is possible to enclose the publication with the accompanying letter without increasing the weight to more than one ounce, that may be done. Since in such instances they will then be handled as letter mail it will be unnecessary to attach the order blanks to the envelope. However, when the combined weight is more than one ounce, which will usually be the case, the publication should not be enclosed. Publications going to Canada, Mexico and all United States possessions do not require foreign postage and therefore are not subject to the terms of the order herein referred to.

Any questions relating to this matter may be directed to Mr. Gillette, who will furnish any additional information desired.

SUBMIT VOUCHERS PROMPTLY. It is of the greatest importance that all vouchers be submitted promptly in order to avoid uncertainty in the financial standing of projects with the consequent interruption of effective administration. Reimbursement vouchers for expenses incurred under continuing letters of authorization should always be submitted MONTHLY.

Expenses incurred under authorizations for specific trips from Washington, of short duration, should be submitted immediately upon the conclusion of the trip. This is particularly important where a cash advance for traveling expenses has been secured. Under such circumstances the account should reach Mr. Swartz not later than two days after the employee's return from his trip.

Vouchers for purchases (Form 1034) should in every instance be submitted not later than thirty days after the expense is incurred. Vouchers which provide for a discount for payment within a specified time particularly should be subject to no delay in transmission, in order that the office may be able to take advantage of the discount offered.

If for any reason the reimbursement vouchers are delayed for more than thirty days after the close of the quarter (January-March, April-June, July-September, October-December), or other vouchers more than sixty days after the incurrence of the expense, a Bureau of Plant Industry regulation requires that an explanation showing the cause for the delay must be submitted with the voucher.

BUS FARES PAID BY TRANSPORTATION REQUESTS. Owing to a recent decision of the Comptroller General, it is now necessary to use transportation requests for all bus fares over \$1.00, or submit an explanation as to why transportation requests could not be used.

HATS ARE NOT CLOTHING--SOMETIMES! According to a ruling by the Comptroller General, hats are not "clothing" in some cases. He says: "The provisions of paragraph 58 of the Standardized Government Travel Regulations which provide for the cleaning and pressing of clothes of employees while in a travel status do not authorize reimbursement of the expense of cleaning the traveler's hat." (A-32136, 10 Comp. Gen. 9).

Comptroller General McCarl in this decision holds that while the travel regulations for many years have contained provisions for cleaning and pressing clothes, it has never been the practice to regard such provisions as including the cleaning of hats. The term "cleaning and pressing" is to be taken as indicating only such items of wearing apparel as are ordinarily pressed or cleaned and pressed at frequent intervals.

EDITORIALLY SPEAKING. John A. Ferrall

LIBRARY FACILITIES. In her annual report, just issued, Miss Claribel R. Barnett, Librarian for the Department, states that 16,563 books, pamphlets and maps were added to the Department's Library last year and on June 30, 1930 (the close of the last fiscal year) the Library contained 218,038 volumes on agricultural subjects and was receiving 4,080 periodicals and 128 daily newspapers. More than 268,000 books and periodicals were circulated during the year!

In addition to the main Library, of course, branch libraries are maintained in the various bureaus. Miss Jessie M. Allen, Librarian of the Bureau of Plant Industry, has just sent out a memorandum concerning library service to the field, in which she mentions that library books and periodicals are sent to the field on temporary loan if not urgently needed in Washington or if there are extra copies available; and a limited number of current periodicals are circulated in the field. Books and periodicals needed for permanent filing at field stations are purchased by the office, of course. The mimeographed lists of current literature on botany and agronomy will be sent regularly on application to Miss Allen, and full explanation of the periodical circulation system furnished. She states that the observance of the following directions for borrowers will help the library to give the best possible service:

"Address all requests for the loan of books and periodicals to Library, Bureau of Plant Industry, U.S.D.A., Washington, D.C.

"Give complete citation for all publications requested. Copy in full references taken from Botany and Agronomy lists.

"Requests must show the names of the individual needing the publications. Charges to stations or offices are too indefinite.

"Indicate on requests when articles in periodicals are urgently needed. If the periodical is not available for immediate loan, we can sometimes have photostat copies of the article made to be sent to you for filing. If urgency is not indicated, requests will be filled when journals can be spared.

"Time limit for publications specially requested is usually two weeks to one month, according to distance from Washington. Extension of time is sometimes possible. Notify the library by card or letter when publications are returned.

"Use and forward current periodicals promptly. From two to four days to each individual is allowed for circulation in Washington. This limit, with time added for transit, should apply to field workers. Date coupons and forward them or cards when periodicals are mailed."

Any correspondence having reference to the loan of books and periodicals, then, should be addressed to Miss Jessie M. Allen, Librarian, Bureau of Plant Industry, U.S. Department of Agriculture, Washington, D.C. Requests for the purchase of books and periodicals or any inquiries relating thereto should continue to be addressed to the head of your section--to project leaders. This applies both to the field and to Washington.

IN A LIGHTER VEIN.

CHRISTMAS GIFTS.--"I want to buy that book in the window called 'How to Captivate Men,'" said the little girl to the assistant in the bookshop.

The salesman looked at her a little dubiously. "That's not the sort of book for you," he said. "What do you want it for?"

"A Christmas gift for daddy," explained the child.

"But surely there are hundreds of books he would rather have," insister the salesman.

"No," persister the girl, "I know he would like that one. You see, he is a policeman."

AND, SPEAKING OF GIVING.--It is truly amazing what stories the wits hang upon the Scotch. One of the latest is Phil Cook's story of the Scotchman who always stopped his watch on entering a room where there was a clock. But I still think that one of the best is J. M. Pickens' story of the Scotchman at the seashore. Mr. Pickens, who is the Bureau's editor, of course, relates that while spending his vacation at the seashore some years ago a Scotchman there happened to be struck very forcibly by an incoming wave while in bathing and lost his false teeth. He offered a reward of \$15.00 for their recovery.

SELF CONTROL EXTRAORDINARY!--The field foreman did not have any too much patience to begin with, and his untrained force of emergency laborers were extremely trying. The foreman's expressive language in moments of tension, however, led to complaints and the superintendent of the station took him aside and cautioned him to be a little more careful in the language used to the men. The foreman promised, but the very next morning things went wrong again and he started to raise his voice but remembered in time and checked himself. "Bless you, my dears," he said. And then he added, significantly, "You know what I mean!"

NARROW ESCAPE.--And it was a farm superintendent who sent us a clipping from a small town paper which reads: "Another Narrow Escape. The other night a Blankville citizen pulled a revolver from under his pillow and blazed away at what he thought was a burglar in his room. Investigation proved that he had shot a hole in his own trousers, hanging on a chair. The only thing that saved him from killing himself was the fact that he had removed his trousers before going to bed."

FEMININE BATTLE SONG: "We are Tinting Tonight, Tinting Tonight!"

PERSONAL MENTION

As the NEWS LETTER "goes to press," the Washington office is having something in the nature of a "moving day," Dr. Auchter having managed to make arrangements for the grouping of the General Service clerical, administrative and fiscal workers in a single building and in a compact unit. This arrangement is certain to help in expediting the handling of administrative matters, accounts, etc.

L. L. Harter attended the meeting of the Tri-State Packers Association at Philadelphia on December 12, making an informal address on progress in the study of lima bean seed troubles.

E. A. Gorman was at Salisbury, Maryland, for three days early in the month, conducting investigations on the frozen pack of strawberries.

"Currants and Gooseberries: Their culture and relation to white-pine blister rust," is the title of Farmers' Bulletin No. 1398, contributed to the Department's series by George M. Darrow and S. B. Detwiler--the latter principal pathologist in charge of the Office of Blister Rust Control of the Bureau of Plant Industry. White-pine blister rust, which threatens to destroy our valuable white-pine timber, is caused by a destructive fungus of foreign origin which must first grow on the leaves of current or gooseberry bushes before it can attack and kill the pines. The growing of black currants, especially, in the white-pine timber regions should be abandoned, say the authors of this bulletin.

C. A. Hagoon attended the conferences of the New York Marketing Research Council at New York City on December 9, reading a paper on the keeping qualities of frozen foods and their relation to the distribution problem.

Walter T. Swingle made a short trip to Philadelphia, Princeton, N.J., and New York City, December 5, and 6, to consult with cooperators and to inspect apparatus and equipment for use in connection with the propagation and study of the date palm. Dr. Lauriston C. Marshall, collaborating in this work, joined Dr. Swingle in New York City.

Federal Farm Board Circular No. 2, "Grow Less--Get More," emphasizes the fact that millions of dollars and hours of work are lost in overproduction. "One thing successful manufacturers learned a long time ago was that they could not make money when they produced more than they could sell at a profit," it says. "So they adopted a policy of adjusting production to demand, at the same time doing everything they could to increase the demand."

Dr. Wm. A. Taylor, Chief of the Bureau of Plant Industry, has been designated by the Secretary to represent the Department in all dealings with the Commissioner of Patents in connection with the act to provide for plant patents.

James H. Beattie has prepared a revised edition of Farmers' Bulletin No. 1233, "Tomatoes for Canning and Manufacturing." The bulletin points out that the tomato is among the first in value of the vegetable canning crops. A large portion of the crop is canned or made into soups, purees, and other products. From 250,000 to 300,000 acres are devoted annually to this crop in the United States for canning and manufacturing purposes, the yield being more than a million tons.

A revision of Farmers' Bulletin No. 1447, "Citrus Fruit Growing in the Southwest," has been prepared by A. D. Shamel, C. S. Pomroy, and R. E. Caryl and is now ready for distribution.

E. D. Mallinon attended the meetings of the Contact Committee and the Fresh Fruit Committee of the Northwest Regional Advisory Board at Portland, Oregon, December 11-15, reading a paper on transportation investigations of fruits and vegetables. C. W. Mann attended this meeting and participated in the informal discussions but did not present a paper.

C. E. Schuster attended the meeting of the Salem Chamber of Commerce at Salem, Oregon, December 1, giving an informal talk on the filbert and walnut situation in its general phases.

Freeman Weiss made a short trip to Babylon, New York, to take notes on root growth in narcissus experiments. While on the trip, he attended the meeting of the Long Island Bulb Growers Association at Babylon on December 11, making an informal address on investigations of diseases of ornamental bulbs in 1930.

S. H. Yarnell has been given an authorization to provide for investigations at Weslaco, Nacogdoches, Winter Haven and Balmahea, Texas, where this office is cooperating with the Texas Agricultural Experiment Station in the vegetable variety type book studies.

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BUREAU OF PLANT INDUSTRY

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